State of New Jersey

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Mail Code – 401-02B
Water Pollution Management Element
Bureau of Surface Water Permitting
P.O. Box 420 – 401 E State St
Trenton, NJ 08625-0420
Phone: (609) 292-4860 Fax: (609) 984-7938

BOB MARTIN
Commissioner

CERTIFIED MAIL
7010 1870 0001 4760 7739
RETURN RECEIPT REQUESTED

March 28, 2013

James Maiz, Senior Vice President
RC Cape May Holdings LLC
900 N Shore Rd
Beesleys Point, NJ 08223

Re: Draft Consolidated Renewal Permit Action
Categories: B -Industrial Wastewater
RF -Stormwater
NJPDES Permit No. NJ0005444
B L ENGLAND GENERATING STATION
Upper Twp, Cape May County

Dear Mr. Maiz:

Enclosed is a **draft** New Jersey Pollutant Discharge Elimination System (NJPDES) permit action identified above which has been issued in accordance with N.J.A.C. 7:14A. This renewal permit proposes to authorize the intake of Great Egg Harbor Bay water as well as the discharge of pollutants through several outfalls to Great Egg Harbor Bay classified as SE-1. There are several discharges from this facility including: cooling tower blowdown (DSN 001A), stormwater (DSNs 003A, 006A and 007A), intake screen backwash (DSN 008A), condenser cooling water discharges (DSNs 009 and 010), wastewater treatment plant effluent (DSN 013A), effluent from the flue gas desulfurization system (DSN 014A – internal point) and effluent from the Continuous Sequential Batch Reactor (DSN 015A – internal point).

Notice of this draft permit action appeared in the *Press of Atlantic City* on March 26, 2013, and will appear in the April 3, 2013 *DEP Bulletin*. The *DEP Bulletin* is available on the internet at http://www.state.nj.us/dep/bulletin or by contacting the DEP Document Distribution Center at (609) 777-4398. In accordance with N.J.A.C. 7:14A-15.10(c)1i, the public comment period will close thirty days after its appearance in the newspaper.

As detailed in the *DEP Bulletin* and aforementioned newspaper, written comments or a request that the Department hold a non-adversarial public hearing on the draft document must be submitted in writing to Pilar Patterson, Chief, Bureau of Surface Water Permitting, P.O. Box 420, Trenton, NJ 08625 by the close of the public comment period. All persons, including the applicant, who believe that any condition of this draft document is inappropriate or that the Department's tentative decision to issue this draft document is inappropriate, must raise all reasonable arguments and factual grounds supporting their position, including all supporting materials, during the public comment period.

The NJDEP will respond to all significant and timely comments upon issuance of the final document. The permittee and each person who has submitted written comments will receive notice of the NJDEP's final decision to issue, revoke, or redraft the document.

If you have questions regarding the draft action, please contact Heather Genievich at (609) 292-4860.

Sincerely,

Susan Rosenwinkel

Susan Rosenwinkel
Supervising Environmental Engineer
Bureau of Surface Water Permitting

Enclosures

c: Permit Distribution List

Masterfile #: 267113; PI #: 46087

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This permit package contains the items listed below:

New Jersey Department of Environmental Protection
Division of Water Quality
Bureau of Point Source Permitting – Region 2

PUBLIC NOTICE

Notice is hereby given that the New Jersey Department of Environmental Protection (Department/NJDEP) proposes to issue a New Jersey Pollutant Discharge Elimination System (NJPDES) Consolidated Permit Renewal Permit NJ0005444 in accordance with N.J.A.C. 7:14A, and by authority of the Water Pollution Control Act at N.J.S.A. 58:10A-1 et seq., for the following discharges:

Applicant or Permittee:	Facility:
RC Cape May Holdings LLC 900 North Shore Road Beesley's Point, NJ 08223	B. L. England Generating Station 900 North Shore Road Upper Township, Cape May County, NJ

RC Cape May Holdings' B.L. England Generating Station (B.L. England or the Station) is a base-load coal and/or oil powered steam electric generating station (Standard Industrial Classification code 4911) located in the Beesley's Point section of Upper Township, Cape May County. The facility is classified as a major discharger by NJDEP in accordance with the United States Environmental Protection Agency (USEPA) rating criteria. There are several discharges from this facility to Great Egg Harbor Bay including: cooling tower blowdown, stormwater, intake screen backwash, condenser cooling water discharges, and wastewater treatment plant effluent.

This draft renewal permit proposes to authorize the intake of Great Egg Harbor River water as well as the discharge of pollutants through several outfalls to Great Egg Harbor River classified as SE-1. This draft permit renewal also proposes to incorporate NJDEP's determination with respect to the permittee's request for a thermal variance from surface water quality standards for heat and temperature pursuant to Section 316(a) of the Federal Water Pollution Control Act, 33 U.S.C. Section 1251 et seq. (Clean Water Act). Further, this draft renewal permit proposes to incorporate NJDEP's determination pursuant to Section 316(b) of the Clean Water Act regarding the best technology available for the cooling water intake structure to minimize adverse environmental impacts.

This draft permit recognizes the Administrative Consent Order (ACO) that BL England entered into with NJDEP's Air Program on January 24, 2006. The ACO required the Station to cease all coal operations by May 1, 2016, at which point the Station will convert to a natural gas facility. As a result of the repowering, there are a number of changes to the facility. Most notably, the energy generating capacity will increase from 447 MW to 584 MW; the volume of intake water will drop from a daily maximum level of 294 MGD to 168 MGD; and the volume of water discharged will drop from a daily maximum level of 291 MGD to 188 MGD.

Modification provisions as cited in the permit may be initiated in accordance with the provisions set forth in Part IV and upon written notification from NJDEP.

A draft NJPDES permit Consolidated Renewal Permit Action has been prepared for this facility based on the administrative record filed at the NJDEP, 401 East State Street, Trenton, New Jersey 08625. Copies of the draft document are obtainable, for a nominal charge, and the administrative record is available for inspection by appointment only, Monday through Friday. If you are interested in scheduling an appointment or requesting specific information regarding the draft document, contact Heather Genievich of the Bureau of Surface Water Permitting at (609) 292-4860 or Dan Kuti of the Bureau of Nonpoint Pollution Control at (609) 633-7021.

Written comments or a request that NJDEP hold a non-adversarial public hearing on the draft document must be submitted in writing to Pilar Patterson, Chief, Bureau of Surface Water Permitting, P.O. Box 420, Trenton, NJ 08625 by the close of the public comment period, which closes thirty calendar days after publication of this notice in the newspaper. All persons, including the applicant, who believe that any condition of this draft document is inappropriate or that NJDEP's decision to issue this draft document is inappropriate, must raise all reasonable arguments and factual grounds supporting their position, including all supporting materials, during the public comment period.

NJDEP will respond to all significant and timely comments upon issuance of the final permit decision. The permittee and each person who has submitted written comments or requested notice will receive notice of NJDEP's's permit decision.

New Jersey Department of Environmental Protection
Division of Water Quality
Bureau of Surface Water Permitting

FACT SHEET

Masterfile #: 15814 **PI #:** 46087

This fact sheet sets forth the principle facts and the significant factual, legal, and policy considerations examined during preparation of the draft permit. This action has been prepared in accordance with the New Jersey Water Pollution Control Act and its implementing regulations at N.J.A.C. 7:14A-1 et seq. - The New Jersey Pollutant Discharge Elimination System.

PERMIT ACTION: Consolidated Renewal Permit Action - **Draft**

1 Overview of Draft Renewal Permit:

The B.L. England Generating Station ("BLE" or the "Station") is a coal and/or oil powered steam electric generating station located in the Town of Beesley's Point, in Upper Township, Cape May County. The Station is owned and operated by RC Cape May Holdings, LLC. The Standard Industrial Classification (SIC) code for this facility is 4911. The facility is classified as a major discharger by the New Jersey Department of Environmental Protection (Department) in accordance with the United States Environmental Protection Agency (EPA) rating criteria.

The permittee has applied for a New Jersey Pollutant Discharge Elimination System (NJPDES) Consolidated Renewal Permit Action through an application dated January 16, 2013. Until such time as this renewal permit is finalized, the existing permit remains in full force and effect pursuant to N.J.A.C. 7:14A-2.8.

This draft renewal proposes to authorize the intake of water from the Great Egg Harbor Bay as well as the discharge of wastewater and stormwater to the Great Egg Harbor Bay. This draft permit renewal incorporates the Department's determination with respect to a thermal variance from the New Jersey Surface Water Quality Standards (SWQS) for heat and temperature pursuant to Section 316(a) of the Federal Clean Water Act. Further, this draft renewal permit incorporates the Department's determination pursuant to Section 316(b) of the Clean Water Act. The permittee is proposing major changes to the Station that will result in environmental benefits in the vicinity of the Station and to the receiving waterbody due to reductions in intake volume, discharge volume, and air emissions.

This fact sheet contains information organized into the following sections:

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2 Name and Address of the Applicant:

RC Cape May Holdings LLC
900 N Shore Rd
Beesleys Point, NJ 08223

3 Name and Address of the Facility/Site:

RC Cape May Holdings LLC
900 N Shore Rd
Upper Township, Cape May County, NJ

4 Facility Description:

A. Description of Current Electric Production and Cooling Water System

The Station is a load following facility that is comprised of three fossil fuel units with an aggregate capacity of 447 Megawatts (MW). Units 1 and 2 are load-following steam turbine units that use either coal or oil and utilize once through condenser cooling. Unit 1 is capable of producing approximately 129 MW while Unit 2 is capable of producing 155 MW. Units 1 and 2 came on line in 1961 and 1962 respectively. Unit 3 is an oil fired unit, which is used on an intermittent basis, and utilizes a closed loop salt water natural draft cooling tower. Unit 3 is capable of producing 155 MW and came on line in 1964. The Station is also comprised of four 2 MW diesel oil-fired reciprocating engines and other ancillary equipment systems used in the generation of electricity. A tabular summary of the existing electric production at the facility is as follows:

Existing BL England Electric Utility Steam Generating Units			
	Unit 1	Unit 2	Unit 3
Installation Date	1961	1962	1964
Unit Type	Steam	Steam	Steam
Nominal Capacity (MW)	129	155	155
Primary Fuel	Bituminous and Powder River Basin Coal	Bituminous and Powder River Basin Coal	No. 6 fuel Oil
Condensing/Cooling	Once-through from Bay	Once-through from Bay	Hyperbolic Cooling Tower

At BLE, as with all steam-electric power plants, steam is used to drive turbines, which in turn produce electricity. BLE's Cooling Water System (CWS) removes the heat energy that remains in the steam after it has passed through the turbines by condensing the steam back to water for reuse in the steam cycle. This process, further described below, takes place in a structure called a condenser.

Water for condenser cooling at BLE Units 1, 2 and 3 is withdrawn from the bay via an intake canal (60 foot by 15 foot minimum depth) which extends about 220 feet offshore. Outboard trash racks serve to remove large materials from the intake water, which then passes through vertical traveling screens equipped with 0.375 inch (3/8 inch) wire mesh. The cooling water intake structure (CWIS) for Unit 1 is served by two Rex vertical traveling screens. These screens were originally installed in 1962. One of the two units was refurbished with a stainless steel frame in approximately 1982. The CWIS for Unit 2 is also served by two Rex vertical traveling screens. These screens were installed in approximately 1963 and, similar to Unit 1, one of these was refurbished in approximately 1982 with a stainless steel frame. The screens are not equipped with fish buckets.

The screens are backwashed with a single high pressure spray of approximately 270 gallons per minute to remove material collected on the screens. The screen washwater for the screens is provided by three 60 horsepower six stage Johnston Co. pumps. Only one of the two screens is in operation at any given time and one of the screen wash pumps is a back-up which serves both Units 1 and 2. The water from the screen wash spray drains into a concrete trough located on the intake side of the traveling water screens. This trough is common to the four traveling water screens. The screen wash water and materials removed from the screen travel approximately 200 feet in an open concrete trough. At this point the screen backwash discharge enters an underground pipe and runs approximately 100 feet to the discharge canal.

After passing through the traveling screens that serve the CWIS, cooling water for Units 1, 2 and 3 enters four concrete pipes (two for each unit). The cooling water is then pumped to the condenser waterboxes through additional underground piping. The condenser waterboxes remove excess heat from the primary steam loop for each of the two units. After leaving the condenser waterboxes, cooling water is pumped underground through two 5.5-ft diameter concrete pipes (one per unit) approximately 425 ft east of the Station to the discharge apron for discharge back to the Great Egg Harbor Bay. The change in water temperature between the intake and the discharge (i.e. the "delta-T" or "ΔT") is approximately 16°F and is primarily attributable to the thermal input of Units 1 and 2.

Cooling tower make-up water for BLE Unit 3 is diverted from the Unit 2 flow at the CWIS at an average rate of approximately 7.4 MGD. The 7.4 MGD represents water lost to the atmosphere through evaporation or make-up water to replace cooling tower blowdown. The cooling tower blowdown is discharged via DSN 001A at an average rate of 5.36 MGD and is generally reused as intake cooling water for Units 1 and 2 given its discharge location and proximity to the CWIS.

B. NJDEP Air Program Administrative Consent Order

On January 24, 2006, *In the Matter of Atlantic City Electric Company, Conectiv and Pepco Holdings, Inc.*, the aforementioned companies entered into an Administrative Consent Order (ACO) with the Department as authorized by N.J.S.A 13:1D-1 *et seq.* and the Air Pollution Control Act of 1954, N.J.S.A. 26:2C-1 *et seq.* Since 2006 there have been multiple amendments to the original ACO which are dated October 31, 2006, January 13, 2010, and May 18, 2012. Since the original ACO was executed, Atlantic City Electric Company (ACEC) entered into a Purchase and Sale Agreement with RC Cape May Holdings, LLC on August 15, 2006, and the Station was subsequently sold. After the

change in ownership, the January 13, 2010 ACO Amendment included a revised timeline by which RC Cape May would either Repower or meet the Performance Standards of the January 24, 2006 ACO. As a result, RC Cape May has determined to Repower BL England and requested a revised timeline to complete the Repowering. The Repowering in the ACO and its amendments refers to the replacement of an existing coal-fired or oil-fired boiler with a new natural gas heat source.

The main points of the Air ACO and its amendments that have a bearing on this NJPDES permit are as follows:

- RC Cape May is required to cease operations of BL England Unit 1 on September 30, 2013.
- RC Cape May is allowed to operate Unit 2 until May 1, 2015 for a maximum of 4,300 hours per year.
- BL England Unit 3 is unaffected by the ACO and its amendments.
- RC Cape May shall Repower BL England by May 1, 2016.

C. Description of Projected Electric Production and Cooling Water System

After the repowering project is complete, the power generating capacity of the station will increase from 447 MW to 584 MW, which is an increase of 131 MW or approximately 30%. While overall energy generating capacity will increase, nitrogen oxide and sulfur dioxide emissions will significantly decrease. As noted above, by the date of the repowering on May 1, 2016, operations from Units 1 and 2 will have ceased. Unit 1 will be retired and Unit 2 will cease operations as a coal-fired unit. Unit 3 which now runs on #6 oil will convert to natural gas. Unit 4 will consist of a new combined cycle combustion turbine which runs on natural gas with a Heat Recovery Steam Generation (HRSG) unit, but will utilize the existing steam turbine that was formerly associated with Unit 2. The former Unit 2 steam turbine is associated with the circulating cooling water.

The HRSG will be equipped with supplemental gas fired duct burners to counteract the drop in electrical output during warmer weather when electrical demand is strongest. The repowered Unit 2 will be equipped with a new steam turbine bypass. Combined cycle plants with combustion turbines typically experience a significant drop in capacity between summer and winter months as compared to the existing simple cycle boiler steam plant design. However, the use of duct burners, which recovers a large portion of this loss in capacity, results in increases in the maximum temperature and temperature difference characteristics of the discharge. Similarly, use of the new steam turbine bypass will elevate temperatures in the discharge for limited periods of time.

A tabular summary of the projected electric production at the facility is as follows:

Future BL England Electric Utility Steam Generating Units After Repowering		
	Unit 3	Unit 4
Installation Date	1964	N/A
Unit Type	Steam	Combined Cycle Steam
Nominal Capacity (MW)	155	425
Primary Fuel	Natural Gas	Natural Gas
Condensing/Cooling	Hyperbolic Cooling Tower	Once-through cooling from Bay

While the existing CWIS will be utilized for the repowered plant configuration, a summary of the changes in withdrawal volumes is as follows:

	Cooling Water Intake Structure				
	Current Plant Configuration		Repowered Plant Configuration		Change
Unit	**Water Type**	**Intake Flow**	**Water Type**	**Intake Flow**	
1	Once-through Cooling	88,000 gpm (126.7 MGD)	-- --	0 gpm (0 MGD)	100% Reduction
2	Once-through Cooling	106,000 gpm (152.6 MGD)	-- --	0 gpm (0 MGD)	See Unit 4
3	Closed-Cycle Cooling	10,400 gpm (15 MGD)	Closed-Cycle Cooling	10,400 gpm (15 MGD)	Unchanged
4	Once-through Cooling	-- --	Once-Through Cooling	106,000 gpm (152.6 MGD)	Unchanged from Unit 2
Total		204,400 gpm (294.3 MGD)		116,400 gpm (167.6 MGD)	**43% Overall Reduction**

5 Description of Discharges and Receiving Waterbody:

A. Description of Discharges Under Current Plant Configuration

A site plan of the facility and the appropriate quadrangle of a USGS map are included at the end of this fact sheet.

The following is a summary of the current discharges and discharge components:

Discharge Serial Number (DSN) **001A** discharges cooling tower blowdown that is used for Unit 3. This circulating water is brominated to prevent biofouling of the cooling cycle. The blowdown is discharged into the intake structure for steam units 1 and 2 at a maximum rate of 5.36 million gallons per day (MGD).

DSN 003A was the slag pond overflow and stormwater. The slag (bottom ash) from steam units 1 and 2 and the slag tank overflow was directed to two slag settling ponds. These ponds operated in series to settle the coarse and fine particles. The flow was discharged to Great Egg Harbor Bay at a maximum rate of 2.86 MGD, however, BL England installed a Bottom Ash Removal (BAR) system in 2009. The BAR is a closed loop system which replaces the slag settling ponds. Using this system, ash decant is processed by the industrial treatment plant and discharged via DSN 013. The pipe that exits the settling ponds has been sealed and the ponds no longer produce a discharge. BL England plans to remove the slag material from the settling ponds. Stormwater continues to be discharged via DSN 003A.

DSNs 006 and 007 are the yard drains. Stormwater from the facility is discharged untreated to Great Egg Harbor Bay through these outfalls. The estimated maximum flow rates for these discharges are 0.243 MGD and 0.448 MGD, respectively.

DSN 008 is the intake screen backwash. This discharge consists of water used to flush algae and detritus that may have accumulated on the intake screens for Units 1, 2, and 3.

DSNs 009 and 010 are the turbine condenser cooling water discharges for steam Units 1 and 2. Each cooling water system can be operated with one or two pumps. For each cooling water system, normal operations involve the use of two pumps during the summer months and one pump during the winter months. For DSN 009, the two pump flow rate is 127 MGD and the one pump flow rate is 58 MGD. For DSN 010, the two pump flow rate is 153 MGD and the one pump flow rate is 68 MGD. On occasion, two pumps are used during the winter months for cooling system maintenance. Therefore, the observed maximum flows for any one month are the two pump flow rates. The discharge for DSNs 009 and 010 is routed to a surface shoreline canal.

DSN 013 is the wastewater treatment plant (WWTP) effluent. The WWTP receives all the process related wastewater which consists of water from floor drains, deionizer water filters wastewater, charcoal filter backwash, demineralizer water wastewater, and boiler blowdown water. Storm water from the coal pile is also routed through the WWTP. Treatment includes oil coalescense, equalization, polymer addition, two stage pH adjustment, flocculation,

clarification, filtration, and neutralization. This maximum flow is 0.69 MGD. In addition to treated process water, this outfall receives sanitary wastewater generated onsite that has been treated and disinfected in the Continuous Sequential Batch Reactor (CSBR). DSN 015 is a new internal monitoring point that is being added for the CSBR effluent.

DSN 014 is the discharge associated with the flue gas desulfurization (FGD) system. The purpose of this system is to reduce sulfur dioxide emissions in order to comply with the Acid Rain Program (Title IV) of the Clean Air Act Amendments of 1990. The scrubber system is designed for sulfur dioxide removal efficiencies of approximately 90%. The scrubber process removes sulfur dioxide by directing flue gas from the combustion process through an aqueous solution of limestone and water. This mixture absorbs the sulfur dioxide from the flue gas, after which the cleaned flue gas and water vapor are carried out of the stack. By introducing the remaining slurry mixture to a process called forced oxidation, crystal formation is maximized and calcium sulfate (or gypsum) is created. The slurry mixture is directed through a dewatering system where the gypsum is removed. The gypsum is sent to cement plants or to a licensed landfill, if needed. The liquids from the dewatering process are directed back into the scrubber process for reuse. The scrubber system generates wastewater. DSN 014 is an internal monitoring point where the treated scrubber wastewater effluent discharges to DSN 010. The maximum flow from this outfall is 0.08 MGD.

DSN 015 is an internal monitoring point for the Continuous Sequential Batch Reactor (CSBR), which discharges treated and disinfected wastewater through DSN 013. A letter from the Department dated February 15, 2012, authorized the effluent from the CSBR to be routed through the industrial wastewater treatment plant at DSN 013, where it was previously injected into well IMW2 under NJPDES permit NJ0077771. This change was due to a significant decrease in domestic wastewater flow where values are currently less than 2000 gallons per day (GPD) as compared to a design flow of 16,000 GPD. This decrease in flow is a result of reduced facility operations and work force reductions.

B. Description of Discharges Under Repowered Plant Configuration

Repowering the BL England Station is expected to have the following effects on the outfalls:

DSN 001A will continue to consist of cooling tower blowdown from Unit 3 to the intake structure for Unit 2. Maximum expected flow is 3,722 gpm, which is equivalent to 5.36 MGD.

DSN 003A previously consisted of slag pond overflow and storm water, however, the outlet from the slag pond has been sealed. Storm water will continue to be discharged via this outfall from the area where the combustion turbine for the proposed new unit, Unit 4, and the Heat Recovery Steam Generator (HRSG) will be located. The projected flow is 0.354 MGD.

DSN 006A and **DSN 007A** will continue to consist of stormwater from yard drains, parking lots, and areas of the Station which are discharged untreated. The estimated maximum flow rates will continue to be 0.243 MGD and 0.448 MGD, respectively.

DSN 008A currently consists of screen backwash for Units 1, 2, and 3. After repowering the discharge from this outfall will continue to be screen backwash for Units 3 and the new unit, Unit 4.

DSN 009A currently consists of once through cooling water for Unit 1, which will cease operations on September 30, 2013. At that time this discharge will cease and the outfall will be sealed.

DSN 010A currently consists of once through cooling water for Unit 2, which will cease operations on May 1, 2015. This outfall will remain and is expected to be used to discharge once through cooling water from a proposed new unit, Unit 4 since Unit 4 will supply the former Unit 2 steam turbine with steam. The expected flow from this outfall is 106,000 gpm (152.6 MGD); at times it may operate at 126,000 gpm (181.4 MGD).

DSN013A will continue to consist of treated process water from the industrial wastewater treatment plant and the Continuous Sequential Batch Reactor (CSBR), however, the discharge volume will decrease and the quality of the discharge is expected to improve.

DSN 014A currently consists of wastewater from flue gas desulfurization. When the use of coal is discontinued at the Station, this discharge will cease and the outfall will be sealed.

DSN 015A will continue to serve as an internal monitoring point for treated and disinfected wastewater from the CSBR.

C. Comparison of Current Plant Configuration Versus Repowered Plant Configuration (using daily maximum flow values)

	Current Plant Configuration		Repowered Plant Configuration		Change
Outfall	**Discharge Type**	**Flow**	**Discharge Type**	**Flow**	
001A	Cooling Tower Blowdown from Unit 3	5.36 MGD	Cooling Tower Blowdown from Unit 3	5.36 MGD	Unchanged
003A	Stormwater near former slag pond	2.86 MGD	Stormwater near Unit 4	0.354 MGD	87% Reduction
006A	Stormwater	0.24 MGD	Stormwater	0.24 MGD	Unchanged
007A	Stormwater	0.45 MGD	Stormwater	0.45 MGD	Unchanged
008A	Intake screen washwater	--	Intake screen washwater	--	Unchanged
009A	Once through cooling from Unit 1	127 MGD	Discharge eliminated due to elimination of Unit 1.	0 MGD	100% Reduction
010A	Once through cooling from Unit 2	153 MGD	Once through cooling from Unit 2	153* MGD	18% Increase
013A	Treated Process Water	0.69 MGD	Treated Process Water	0.22 MGD	Unchanged
014A	Wastewater from flue gas desulfurization	0.08 MGD	Discharge eliminated due to elimination of coal	0 MGD	100% Reduction
015A	Continuous Sequential Batch Reactor	0.002 MGD	Continuous Sequential Batch Reactor	0.002 MGD	New internal monitoring point; no change to overall discharge volume

* The expected nominal flow for Unit 2 is 153 MGD but at times may operate at 181 MGD for only short periods of time.

D. Discharge Location Information

The following is a summary of the outfall discharge locations. While some of these outfalls may be eliminated as a result of repowering, their locations will be unchanged.

Outfall:	**001A**	**003A**	**006A**	**007A**	**008A**
Receiving Water:	Great Egg Harbor Bay	Great Egg Harbor Bay	Great Egg Harbor Bay	Great Egg Harbor Bay	Great Egg Harbor Bay
Via :	Pipe	Pipe	Pipe	Pipe	Pipe
Outfall Configuration:	Submerged Pipe	Partially Submerged Pipe	Partially Submerged Pipe	Partially Submerged Pipe	Partially Submerged Pipe
Classification:	SE-1	SE-1	SE-1	SE-1	SE-1
County:	Cape May	Cape May	Cape May	Cape May	Cape May
Municipality:	Upper Township	Upper Township	Upper Township	Upper Township	Upper Township
WMA:	15	15	15	15	15
Watershed:	Great Egg Harbor	Great Egg Harbor	Great Egg Harbor	Great Egg Harbor	Great Egg Harbor

Subwatershed:	Great Egg Harbor Bay/Lakes Bay/Skull Bay/Peck Bay	Great Egg Harbor Bay/Lakes Bay/Skull Bay/Peck Bay	Great Egg Harbor Bay/Lakes Bay/Skull Bay/Peck Bay	Great Egg Harbor Bay/Lakes Bay/Skull Bay/Peck Bay	Great Egg Harbor Bay/Lakes Bay/Skull Bay/Peck Bay
HUC 14:	02040302060040	02040302060040	02040302060040	02040302060040	02040302060040
Latitude:	39° 17' 27.3"	39° 17' 31.8"	39° 17' 27.8"	39° 17' 25.7"	39° 17' 24.5"
Longitude:	74° 38' 2.9"	74° 38' 8.4"	74° 38' 3.5"	74° 38' 1.0"	74° 37' 58.2"
Water Quality Impairments	Dissolved Oxygen	Dissolved Oxygen	Dissolved Oxygen	Dissolved Oxygen	Dissolved Oxygen

Outfall:	**009A**	**010A**	**013A**	**014A**	**015A**
Receiving Water:	Great Egg Harbor Bay	Great Egg Harbor Bay	Great Egg Harbor Bay	Great Egg Harbor Bay	Great Egg Harbor Bay
Via :	Pipe	Pipe	Pipe	DSN 010A	DSN 013A
Outfall Configuration:	Partially Submerged	Partially Submerged	Partially Submerged	Internal Point – discharges to 010	Internal Point – discharges to 013
Classification:	SE-1	SE-1	SE-1	SE-1	SE-1
County:	Cape May	Cape May	Cape May	Cape May	Cape May
Municipality:	Upper Township	Upper Township	Upper Township	Upper Township	Upper Township
WMA (a):	15	15	15	15	15
Watershed:	Great Egg Harbor	Great Egg Harbor	Great Egg Harbor	Great Egg Harbor	Great Egg Harbor
Subwatershed:	Great Egg Harbor Bay/Lakes Bay/Skull Bay/Peck Bay	Great Egg Harbor Bay/Lakes Bay/Skull Bay/Peck Bay	Great Egg Harbor Bay/Lakes Bay/Skull Bay/Peck Bay	Great Egg Harbor Bay/Lakes Bay/Skull Bay/Peck Bay	Great Egg Harbor Bay/Lakes Bay/Skull Bay/Peck Bay
HUC 14 (b):	02040302060040	02040302060040	02040302060040	02040302060040	02040302060040
Latitude:	39° 17' 24.8"	39° 17' 24.5"	39° 17' 29.1"	39° 17' 24.8"	39° 17' 29.5"
Longitude:	74° 37' 58.2"	74° 37' 57.8"	74° 38' 20.6"	74° 37' 57.6"	74° 38' 10.2"
Water Quality Impairments (c):	Dissolved Oxygen	Dissolved Oxygen	Dissolved Oxygen	Dissolved Oxygen	Dissolved Oxygen

Receiving Water Dilution Factors for DSN003 and DSN013 Under Current Plant Configuration	
Acute :	4
Chronic :	10

Footnotes:
(a) WMA = Watershed Management Area
(b) HUC 14 = 14 digit Hydrologic Unit Code
(c) These parameters are listed on Sublist 5 as impaired for this waterbody as per New Jersey's 2010 Integrated Water Quality Monitoring and Assessment Report (includes 305(b) Report and 303(d) List).

A copy of the appropriate section of a USGS quadrangle map indicating the location of the facility and discharge points is included toward the end of the Fact Sheet.

E. Description of Great Egg Harbor Bay

Great Egg Harbor Bay (GEHB) is hydraulically connected to the Atlantic Ocean at the Great Egg Harbor Inlet (Inlet). The Inlet is bordered to the north by a barrier island, Absecon Island (the location of Atlantic City) and to the south by Peck Bay and the barrier island on which Ocean City is located. The Inlet is a navigable waterway and 13,860 feet (4,225 meters) wide.

GEHB is receives freshwater inflows from four main surface sources: Tuckahoe River, Middle River, Great Egg Harbor River, and Patcong Creek. The three rivers drain the Pinelands Management Area and flow through the Lester G. MacNamara Wildlife Management Area.

GEHB is generally a shallow estuarine complex with many marsh islands. Within the estuary complex is the shallow Peck Bay with water depths less than 3 ft (1 m) at Mean Low Water (MLW) as well as navigation channels at depths of more than 30 ft (10 m). Although the navigation channel at the Inlet is not maintained by the United States Army Corps of Engineers, the Corps dredges the ebb shoal that forms inside GEHB and the spoils are used at Ocean City as beach nourishment to mitigate erosion. The Corps has dredged the ebb shoal as part of a storm damage reduction project at Ocean City since 1992, where the total volume of material removed is nearly 12,000,000 cubic yards.

GEHB experiences semi-diurnal tides (twice daily high and low) with minimal tidal dampening (lowering of tide height). The National Oceanic and Atmospheric Administration (NOAA) has historically monitored tides within this estuary and continues to maintain a tidal elevation gauge at Atlantic City, since obsolete monitoring locations within the estuary have been phased out. NOAA provides an interactive map to access historical tidal data, and several locations within the estuary were used in the past to characterize tides within GEHB and the estuary (NOAA 2005). The tides at Longport, New Jersey (on Absecon Island) have a mean range of 3.8 ft (1.15 m), while a location within Patcong Creek has a mean range of 4.0 ft (1.23 m), and the mean tidal range near the mouth of the Tuckahoe River is 3.5 ft (1.08 m).

CH2MHill prepared a report in 1993 in support of permitting a flue gas desulfurization wastewater treatment system at BLE, namely DSN 014. The report included studies of tidal phase, water depth, current speed, ambient temperature, conductivity, and salinity. The USEPA's Storage and Retrieval water quality database (STORET) was searched for locations within GEHB and four locations were found to be near BLE. These four locations were found to have a limited temporal data set. Three of the STORET stations (corresponding to river locations) have recorded data from two sample dates, while the final location was sampled 87 times. However, only 11 of these samples included information other than total and fecal coliform levels. The data from the STORET database for the three river stations show pH of 7.0 – 7.5 and salinity of 14.0 – 23.5 ppt. The data range for the fourth STORET station showed a pH range of 6.2 – 8.3, and salinity was not sampled. For the CH2MHill report, eight samples were collected at a location 1,300 feet from the shore near Beesley's Point in GEHB. The samples included profiles of current velocity, temperature, and salinity over the course of a tidal cycle. The reported results demonstrated the dynamic nature of salinity and temperature over the tidal cycle in GEHB. During flooding tides, temperature decreases and salinity increases due to the advance of water from the Atlantic Ocean into GEHB. During ebbing tides, water temperature increases and salinity decreases as freshwater (which was warmer than ambient GEHB water during the sampling period) enters GEHB from the upland rivers and adjoining salt marsh systems.

As per the SWQS at N.J.A.C. 7:9B, the designated uses for Saline Estuary 1 (SE1) receiving waters such as GEHB are:

1. Shellfish harvesting in accordance with N.J.A.C. 7:12;
2. Maintenance, migration and propagation of the natural and established biota;
3. Primary and secondary contact recreation; and
4. Any other reasonable uses.

As noted in Section 3 above, this segment of the Great Egg Harbor Bay is impaired for Dissolved Oxygen. This permit action includes new limitations for Dissolved Oxygen at outfall DSN 013A in order to protect the Dissolved Oxygen levels in the receiving stream.

6 Clean Water Act Regulatory Overview:

A. Sections 316(a) and (b) of the Clean Water Act

The Federal Water Pollution Control Act (the "Clean Water Act" or "CWA"), 33 U.S.C. 1251 et seq., authorizes federal and state agencies to regulate discharges of pollutants to surface waters through the National Pollutant Discharge Elimination System (NPDES) permit program. The USEPA, which originally administered the NPDES program for New Jersey, delegated program authority to the Department in 1982. The Department implements the NPDES program through the NJPDES regulations (N.J.A.C. 7:14A-1 et seq.) which were promulgated pursuant to the authority of the New Jersey Water Pollution Control Act (N.J.S.A. 58:10A-1 et seq.).

In 1972, Congress enacted the CWA requiring all point source dischargers of pollutants, including heat, to obtain a permit from USEPA or from a state with delegated permitting authority. Section 316 of the CWA contains parts (a) and (b). Section 316(a) addresses thermal aspects of the discharge. Section 316(a) provides that a variance from thermal surface water quality standards can be granted if the permittee can demonstrate that a balanced indigenous population is being maintained in the receiving water, meaning less stringent thermal effluent limits may be imposed. Federal regulations for Section 316(a) as well as state regulations regarding thermal impacts are summarized in more detail later in this document. Section 316(b) addresses impacts of the cooling water intake structure on aquatic life, namely impingement and entrainment effects. The term "cooling water intake structure" (CWIS) is defined as the total physical structure and any associated constructed waterways used to withdraw cooling water from waters of the U.S. The CWIS extends from the point at which water is withdrawn from the surface water source up to, and including, the intake pumps.

Section 316(b) "require[s] that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact." The majority of environmental impacts associated with intake structures are caused by water withdrawals that ultimately result in aquatic organism losses. In that regard, cooling water intakes can have two types of effects. The first effect, referred to as *impingement*, occurs when organisms are caught on the intake screens or associated trash racks. The second effect, referred to as *entrainment*, occurs when organisms pass through the facility's intake screens and the cooling system itself.

Impingement takes place when organisms are trapped against intake screens by the force of the water passing through the cooling water intake structure. Impingement can result in starvation and exhaustion (organisms are trapped against an intake screen or other barrier at the entrance to the CWIS), asphyxiation (organisms are pressed against an intake screen or other barrier at the entrance to the CWIS by velocity forces that prevent proper gill movement, or organisms are removed from the water for prolonged periods of time), and descaling (fish lose scales when removed from an intake screen by a wash system) as well as other physical harm.

Entrainment occurs when organisms are drawn through the CWIS into the cooling system. Organisms that become entrained are normally relatively small benthic, planktonic, and nektonic organisms, including early life stages of fish and shellfish. Many of these small organisms serve as prey for larger organisms that are found higher on the food chain. As entrained organisms pass through a plant's cooling system they are subject to mechanical, thermal, and/or toxic stress. Sources of such stress include physical impacts in the pumps and condenser tubing, pressure changes caused by diversion of the cooling water into the plant or by the hydraulic effects of the condensers, shear stress, and chemical toxemia induced by antifouling agents such as chlorine.

B. Section 316(b) Regulation Recent History

EPA issued final regulations for Phase II facilities effective September 7, 2004 to guide implementation of the 316(b) statute. Phase II existing facilities, as defined by EPA, are facilities that commenced construction before January 17, 2002 that have design flows over 50 MGD. This facility met the definition of a Phase II facility under the Phase II regulations. The Phase II regulations were appealed by multiple parties.

In Riverkeeper, Inc., v. EPA, No. 04-6692, (2d Cir. January 25, 2007) the Second U.S. Circuit Court of Appeals issued its decision in the litigation over the Phase II regulation. The court's decision remanded several provisions of the Rule on various grounds including, but not limited to the following:

- EPA's determination of the Best Technology Available under section 316(b);
- The Rule's performance standard ranges;
- The Cost-cost and cost-benefit compliance alternatives;
- The Technology Installation and Operation Plan provision and;
- The restoration provisions.

EPA then suspended the Phase II Section 316(b) regulations as articulated in the July 9, 2007 Federal Register. EPA directed States and permitting authorities to issue permits in accordance with Best Professional Judgment (BPJ) pursuant to 40 CFR 401.14.

Cost-benefit analysis was one element of the Second Circuit Court decision. The issue of cost-benefit analysis was brought before the Supreme Court. Specifically, the question presented was "Whether 316(b) of the Clean Water Act, 33 U.S.C. 1326(b), authorizes the EPA to compare costs with benefits when determining the "best technology available for minimizing adverse environmental impacts" at cooling water intake structures?"

On April 1, 2009, the Supreme Court issued a decision regarding the validity of cost/benefit determinations for Phase II facilities. The Supreme Court determined that the EPA permissibly relied on cost-benefit analysis in providing for cost-benefit variances from those standards as part of the Phase II regulations.

EPA agreed to a consent decree with the Riverkeeper which establishes a deadline to propose new federal Section 316(b) rules by March 14, 2011 where finalization was expected on July 27, 2012 (http://water.epa.gov/lawsregs/lawsguidance/cwa/316b/). EPA issued draft regulations on March 14, 2011. Since that time, a modified settlement agreement was executed which requires EPA to finalize the 316(b) standards by June 27, 2013. In the meantime, states are required to issue Section 316(b) determinations in accordance with BPJ until such time as the new Section 316(b) regulations are finalized.

C. Application of Phase I Versus Phase II Section 316(b) Regulations

As part of the Department's review of Section 316(b) authority, the Department evaluated whether the Section 316(b) regulations under "Phase I" were applicable to this facility. Phase I regulations are applicable to new facilities and were published in the Federal Register Notice dated December 18, 2001 (http://www.epa.gov/fedrgstr/EPA-WATER/2001/December/Day-18/w28968.htm). As per 40 CFR § 125.83 entitled "What special definitions apply to this subpart?" the definition of new facility is as follows:

> *New facility* means any building, structure, facility, or installation that meets the definition of a "new source" or "new discharger" in 40 CFR 122.2 and 122.29(b)(1), (2), and (4) and is a greenfield or stand-alone facility; commences construction after January 17, 2002; and uses either a newly constructed cooling water intake structure, or an existing cooling water intake structure whose design capacity is increased to accommodate the intake of additional cooling water. New facilities include only "greenfield" and "stand-alone" facilities. A greenfield facility is a facility that is constructed at a site at which no other source is located, or that totally replaces the process or production equipment at an existing facility (see 40 CFR 122.29(b)(1)(i) and (ii)). A stand-alone facility is a new, separate facility that is constructed on property where an existing facility is located and whose processes are substantially independent of the existing facility at the same site (see 40 CFR 122.29(b)(1)(iii)). New facility does not include new units that are added to a facility for purposes of the same general industrial operation (for example, a new peaking unit at an electrical generating station).
>
> (1) Examples of "new facilities" include, but are not limited to the following scenarios:
> (i) A new facility is constructed on a site that has never been used for industrial or commercial activity. It has a new cooling water intake structure for its own use.

(ii) A facility is demolished and another facility is constructed in its place. The newly-constructed facility uses the original facility's cooling water intake structure, but modifies it to increase the design capacity to accommodate the intake of additional cooling water.

(iii) A facility is constructed on the same property as an existing facility, but is a separate and independent industrial operation. The cooling water intake structure used by the original facility is modified by constructing a new intake bay for the use of the newly constructed facility or is otherwise modified to increase the intake capacity for the new facility.

(2) Examples of facilities that would not be considered a “new facility" include, but are not limited to, the following scenarios:

(i) A facility in commercial or industrial operation is modified and either continues to use its original cooling water intake structure or uses a new or modified cooling water intake structure.

(ii) A facility has an existing intake structure. Another facility (a separate and independent industrial operation), is constructed on the same property and connects to the facility's cooling water intake structure behind the intake pumps, and the design capacity of the cooling water intake structure has not been increased. This facility would not be considered a “new facility" even if routine maintenance or repairs that do not increase the design capacity were performed on the intake structure.

In consideration of the above, the Department has determined that BL England is not a “new facility” based on the following:

- BL England is not proposing a greenfield or stand-alone facility but rather is a repowered version of an existing facility.
- The existing cooling water intake structure is being utilized for the repowered units.
- The design capacity of the existing cooling water intake structure is being decreased due to less water use.

In sum, because BL England is covered under the Phase II Section 316(b) regulations which are currently in draft format, the Department is making its Section 316(b) determination in accordance with BPJ pursuant to 40 CFR 401.14.

7 Section 316(b) Determination and Information:

A. Historical Section 316(b) Studies

1. Report On A 52-Week Study of Impingement at the B.L. England Generating Station

Impingement sampling was conducted at the B.L. England Station from March 1988 through February 1989 inclusive by Environmental Consulting Services, Inc. where the report is dated February 1, 1991. Impingement methods included a program design that provided for taking a continuous 24-hour sample during one 24-hour collection period per week. During the first seven weeks of the program, sampling collection ranged from 892 minutes to 1,343 minutes per sample event. Beginning April 20, 1988, 1,440 minutes samples were collected for 37 of the 45 sampling events. Experiments to assess collection efficiency were conducted by releasing a known number and length-frequency distribution of dead and stained specimens in front of the traveling screens and recording their occurrence in the standard impingement collections. Blue crab impingement survival studies were also conducted.

A summary of impingement results from the study are as follows:

- 80,796 blue crabs were collected; blue crabs were collected in all samples with peak densities occurring in spring and fall.
- 482 blue crab specimens were evaluated for impingement survival where percent survival ranged from 66.7% to 100% with a mean percent survival of 92.7%. Survival was not dependent on specimen size.

- 20,644 specimens of finfish, representing at least 80 species were collected in 71,987 minutes of impingement sampling.
- 90% of the finfish collected were represented by the following species - Spot (29.6%), bay anchovy (18.7%), Atlantic silverside (14%) , hogchoker (10%), oyster toadfish (4%), blueback herring (3.3%), northern puffer (3%), threespine stickleback (3%), striped cuskeel (3%), and northern pipefish (2%).
- Spot were collected from June through February with increased monthly densities in June, August and October.
- Bay anchovy were collected in all months except March; monthly mean densities were greater in May through August and October and November.

2. A 12-Month Study of Entrainment at the B.L. England Generating Station

Entrainment sampling was conducted at the B.L. England Station from March 1988 through February 1989 inclusive by Environmental Consulting Services, Inc. where the report is dated June 30, 1990. The program design for entrainment sampling provided for taking four samples (two during daylight and two during darkness) one day per week. The sampling day began approximately two hours after sunset and continued at six hours intervals until four samples had been collected. A total of 189 samples were collected. Samples were collected from the mid-point of the water column in the discharge canal for either Unit 1 or Unit 2. Samples were fixed and stained in the field with a rose-begal formalin solution where fish and macroinvertebrates were removed from the sample detritus, identified to the lowest practicable taxonomic level, and enumerated.

A summary of entrainment results from this study are as follows:

- The total number of macroinvertebrates collected was 1,868,690; the total mean annual density was 19,264 per 100 m^3.
- *Neomysis Americana* (opossum shrimp), *Corophium* spp and *Ampelisca* spp together compromised 96.8% of the macroinvertebrates collected.
- *Neomysis Americana* was the most abundant macroinvertebrate collected (total annual density of 16,213 per 100 m3) where highest densities occurred during the months of March, July and February.
- *Corophium* spp was the next most abundant macroinvertebrate collected (total annual density of 1400 per m3). Highest densities occurred in May and December.
- *Ampelisca* spp. was the third most abundant macroinvertebrate (total annual densities of 1021 per m3). Highest densities occurred in May and July.
- The total number of ichthyoplankton collected was 107,201 eggs, 9,981 larvae and 682 juveniles representing 28 species of finfish.
- Bay anchovy was the most abundant finfish species collected with 102,729 eggs, 3906 larvae and 500 juveniles, representing 90.9% of the total finfish collected.
- Bay anchovy eggs were collected from May 19 through September 22 and on October 12. Larvae were collected from June 23 through August 18 and then sporadically through December 1. Juveniles were collected from July 7 through December 15.
- Atlantic silverside was the next most abundant finfish species collected with 269 eggs, 2775 larvae and 5 juveniles, representing 2.6% of the total finfish collected.
- *Gobiosoma* spp. was the third most abundant finfish species collected with 1 egg, 2774 larvae and 53 juveniles, representing 2.4% of the total finfish collected.

B. Section 316(b) Determination in Previous Permit

The final permit was issued on January 11, 2005 and became effective March 1, 2005. Shortly before that, EPA's Phase II regulations had become effective on September 7, 2004. This regulation included a requirement for a Proposal for Information Collection (PIC) as well as various Comprehensive Demonstration Study (CDS) Requirements to be included as part of any renewal application.

At the time of the January 11, 2005 permit renewal, B.L. England was considering cessation of operations on or about December 15, 2007. As a result, the best technology available determination in the January 11, 2005 permit stated the following:

> If Operations Cease: The Department recognizes that B.L. England may cease its operations on or around December 15, 2007 which would result in a cessation of the intake of water for once through cooling. If B.L. England does indeed cease its operations it would no longer have an intake for the purposes of once through cooling and hence would no longer meet the eligibility criteria for Phase II of Section 316(b). Therefore, if operations cease, B.L. England will not be required to comply with 40 CFR 125.95.
>
> If Operations Continue: If B.L. England does not cease its operations, it is required to comply with the Proposal for Information Collection requirements at 40 CFR 125.95 as well as the Comprehensive Demonstration Study Requirements at 40 CFR 125.95(b). A Proposal for Information Collection should be submitted to the Department by September 7, 2005 as indicated in Part IV. If a regulatory approval or Administrative Consent Order between the Department and Conectiv (that is a prerequisite to the cessation of operations) is either finalized or actively under consideration as of September 7, 2005, the Department may, in its discretion, consider a request to extend the September 7, 2005 deliverable date as a minor modification to this permit.

As a result, the Department specified in the January 11, 2005 renewal permit that a CDS was to be submitted by January 7, 2008.

C. Description of Recent 316(b) Studies

1. Proposal for Information Collection

Subsequent to the issuance of the January 11, 2005 permit, AKRF, on behalf of the permittee, submitted a PIC entitled "316(b) Proposal for Information Collection Prepared in Compliance with 40 CFR 125.95(b)(1) for B.L. England Generating Station, Beesley's Point, NJ" dated June 13, 2005. The purpose of the PIC, as described at 40 CFR 125.95(b)(1), is as follows:

> (i) A description of the proposed and/or implemented technologies, operational measures, and/or restoration measures to be evaluated in the Study;
>
> (ii) A list and description of any historical studies characterizing impingement mortality and entrainment and/or the physical and biological conditions in the vicinity of the cooling water intake structures and their relevance to this proposed Study. If you propose to use existing data, you must demonstrate the extent to which the data are representative of current conditions and that the data were collected using appropriate quality assurance/quality control procedures;
>
> (iii) A summary of any past or ongoing consultations with appropriate Federal, State, and Tribal fish and wildlife agencies that are relevant to this Study and a copy of written comments received as a result of such consultations; and
>
> (iv) A sampling plan for any new field studies you propose to conduct in order to ensure that you have sufficient data to develop a scientifically valid estimate of impingement mortality and entrainment at your site. The sampling plan must document all methods and quality assurance/quality control procedures for sampling and data analysis. The sampling and data analysis methods you propose must be appropriate for a quantitative survey and include consideration of the methods used in other studies performed in the source waterbody. The sampling plan must include a description of the study area (including the area of influent of the cooling water intake structure(s)), and provide a taxonomic identification of the sampled or evaluated biological assemblages (including all life stages of fish and shellfish).

The Department approved the PIC in a letter dated January 4, 2006 and addressed to Marilyn Booth of Conectiv from Pilar Patterson of the Department.

2. 316(b) Report NJPDES Permit Number NJ0005444 RC Cape May Holdings, LLC, B.L. England Generating Station

i. Overview

Subsequent to the issuance of the PIC, the Second U.S. Circuit Court of Appeals issued its decision in the litigation over the Phase II regulation, as described previously. See Riverkeeper, Inc., v. EPA, No. 04-6692, (2d Cir. January 25, 2007). Because the court's decision remanded several provisions of the Rule on various grounds, EPA "suspended" the Phase II rule as articulated in the July 9, 2007 Federal Register notice. The Department carefully considered the court decision in determining what is useful and appropriate within the context of the CDS. As a result, the Department determined that Source Waterbody Flow Information and the Impingement Mortality and/or Entrainment Characterization Study (40 CFR 125.95(b)(2) through (3)) were still appropriate and required to be submitted. The Department has the authority to request this information pursuant to BPJ pursuant to 40 CFR 401.14. In addition, the Department determined that any renewal application must contain a complete analysis of the suite of intake protection technologies that are available to address impingement and entrainment. The Department specified a due date of June 30, 2008 for this 316(b) study information.

On behalf of the permittee AKRF submitted the "316(b) Report NJPDES Permit Number NJ0005444 RC Cape May Holdings, LLC, B.L. England Generating Station", in February 2008. The 316(b) Report consists of the following sections and subsections:

1) Information Required Under 40 CFR 125.95(a)(2)
   - Source Water Physical Data
   - Cooling Water Intake Structure (CWIS) Data
   - Cooling Water System Data

2) Impingement Mortality and Entrainment Characterization Study
   - Impingement and Entrainment Studies at BLE
   - Taxonomic Identification of All Life Stages and Species of Fish and Shellfish
   - Characterization of Annual, Seasonal, and Diel Variations in Impingement Mortality and Entrainment
   - Documentation of Impingement Mortality and Entrainment.

3) Design and Construction Technology Plan
   - Capacity Utilization Rate
   - Narrative Description of Design and Construction Technologies and Operational Measures to Reduce Impingement Mortality
   - Reductions in Impingement Mortality and Entrainment
   - Design and Engineering Calculations, Drawings
   - Estimates Supporting Descriptions of Technological and Operational Measures to Reduce Impingement Mortality and Entrainment.

The following seven species were selected as RIS for BLE's Impingement Mortality and Entrainment Characterization Study:

- Bay Anchovy
- Atlantic menhaden
- Atlantic silverside
- Atlantic croaker
- Weakfish
- White perch
- Blue crab

The 2008 316(b) study uses these RIS in order to (i) characterize annual, seasonal, and diel variations in impingement mortality and entrainment, (ii) document current impingement mortality and entrainment, and (iii) estimate baseline ("Calculation Baseline") impingement mortality and entrainment.

The RIS impact assessment approach is based on the concept that it is not feasible or cost effective to measure power plant effects on all species inhabiting aquatic environments. In most aquatic ecosystems it is, however, generally possible to identify biota which because of their abundance, distribution, ecological, or economic importance are essential to and/or representative of the maintenance of balanced, indigenous populations of shellfish, fish, and wildlife. These RIS are used to focus impact assessment efforts, making the assumption that if populations of these surrogate species are protected, then other populations, and the ecosystem as a whole, will also be protected. Because many RIS are near the top of the estuarine food webs or are key links in food webs, changes in the abundance or distribution are indicators of system wide alterations. In order for RIS to be reliable indicators of impact, they should include biota that are sensitive to power plant impacts as well as biota that are representative of all major trophic levels.

Under the RIS approach, the impact assessment focuses on a small number of species that are both (i) representative of other species in a waterbody and (ii) important in that they have special human use or ecological value. The RIS approach is based on USEPA issued 1977 Guidance which provided a detailed approach for the selection of representative species for conducting 316(b) analyses.

The State of New Jersey lists seven species of threatened or endangered marine/estuarine wildlife that could potentially be affected by the BLE CWIS. These include five species of endangered marine turtles (Atlantic hawksbill – *Eretmochelys imbricata*, Leatherback – *Dermochelys coriacea*, Loggerhead – *Caretta caretta*, Kemp's Ridley – *Lepidochelys kempi*, and Green sea turtle – *Chelonia mydas*) and the endangered shortnose sturgeon (*Acipenser brevirostrum*) and Atlantic sturgeon (Acipenser oxyrhinchus oxyrhinchus). During the monitoring efforts in 1988-1989 and 2005-2006, no sturgeons or marine sea turtles were encountered at BLE.

ii. Impingement and Entrainment Sampling Methods:

Finfish and macroinvertebrate entrainment and impingement data were collected in a 2005-2006 survey at BLE pursuant to the PIC. In addition, historical data from 1988-1989 on impingement and entrainment were available. Similar methodologies were employed for both the 1988-1989 and 2005-2006 surveys.

The impingement sampling was designed as a year-round program, with sample collection occurring during one 24-hour period per week. On each sampling day, all screen wash flow was sampled during four consecutive 6-hour events. A total of 1,440 minutes of screen wash flow (conditions permitting) was scheduled to be examined on each sampling day. Processing of the samples included taxonomic identification, number, weight, and length data, as well as physiochemical parameters including water temperature, weather, and sailinity, and records of BLE operational status.

In addition to impingement abundance sampling, a latent impingement mortality ("LIM") study was conducted for blue crabs during the 2005-2006 survey. For the LIM study, sampling was conducted during a 24-hour impingement monitoring event once per week. Blue crabs collected in impingement sampling and retained for LIM monitoring were measured and placed in an onsite holding facility. The holding facility was a closed-cycle system consisting of a 300-gallon reservoir tank and a 200-gallon holding table. The holding water was monitored on a daily basis for temperature, salinity, and dissolved oxygen concentration. LIM observations were made twice at 24-hour intervals during the 2-day (48-hour) holding period. During the first observation, any dead specimens were removed. At the 48-hr observation all specimens were categorized as live, dead, or unknown.

For each entrainment study, sampling was conducted during one 24-hr collection event each week of the study. During each of those 24-hr events, sampling was scheduled at 6-hr intervals yielding four samples per event. Samples were collected at the mid-point of the water column using a pump-net sampling system deployed in either the Unit 1 or Unit 2 cooling water discharge canal, as Station operations dictated. Samples were pumped from the discharge canal into an entrainment sampling chamber consisting of a 260-gallon cylindrical tank containing a 1.0-m diameter, 0.5-mm mesh, conical plankton net in which the sample was concentrated. The target sample volume was 50 m^3 per sample

with the actual volume recorded for each sample. Samples were preserved onsite and transported to an off-site laboratory for processing. In the laboratory, fish and macroinvertebrates were identified to the lowest practicable taxonomic level and enumerated.

In order to calculate mortality estimates, cooling water flow values are necessary. Cooling water flows for BLE's actual plant operating conditions over the five year period of 2002 through 2006 were used for documenting current impingement mortality and entrainment. Estimates of weekly cooling water flow for Units 1, 2, and 3 for all weeks within the five-year period were derived from available data on net power generation for the three units over the same five years, and from seasonal regression relationships between cooling water flow rates and net power generation. The seasonal regression relationships were derived from cooling water flow and net generation data for 2005 and 2006. For the five-year period 2002-2006, the average weekly combined cooling water flow for the three units ranged from 42,433 gpm to 156,190 gpm.

iii. Impingement Sampling Results:

In the 1988-1989 survey, a total of 20,644 specimens of finfish, representing at least 80 species, was collected in 71,987 minutes of impingement sampling at BLE during 52 weekly collection periods between March 1988 and February 1989. In the 2005-2006 survey, a total of 6,102 specimens of finfish, representing at least 60 species, was taken in 60,221 minutes of impingement sampling at BLE during 54 weekly collection periods between May 1, 2005 and May 31, 2006. Because impingement densities were calculated for the 1988-1989 study and the 2005-2006 study, a comparison could be made based on the flow conditions described above. In addition, both sets of numbers were adjusted for collection efficiency. The following table lists impinged species by abundance:

Current Impingement Mortality estimates for RIS based on estimated impingement densities from the 1988-1989 and 2005-2006 Impingement Monitoring Programs at BLE

Species	Age Class of Finfish or Length Class of Blue Crab	Annual Impingement Mortality (Number of organisms per year) 1988-1989	Annual Impingement Mortality (Number of organisms per year) 2005-2006
Blue Crab	0-30 mm	33,590	13,271
	31-60 mm	45,042	12,363
	61-90 mm	5,695	3,111
	91-120 mm	1,994	2,836
	121-150 mm	1,979	2,449
	>150 mm	8,741	169
Bay Anchovy	Juvenile	8,625	27,247
	Age 1 and Older	320,827	18,196
Atlantic Menhaden	Juvenile	188	10,215
	Age 1 and Older	167	64
Atlantic Silverside	Juvenile	20,570	1,588
	Age 1 and Older	10,808	0
Atlantic Croaker	Juvenile	0	2,322
	Age 1 and Older	0	0
Weakfish	Juvenile	1,139	1,637
	Age 1 and Older	9	21
White Perch	Juvenile	93	1,476
	Age 1 and Older	0	0
All RIS	All Age and Length Classes	459,467	96,965

iv. Entrainment Sampling Results:

In the 1988-1989 survey, a total of 117,864 specimens of finfish were collected at BLE in weekly sampling from March 1988 through February 1989. This total included 107,201 eggs, 9,981 larvae, and 682 juveniles. The entrainment collection represented 28 species of finfish. A total of 106 macroinvertebrates from eight phyla were collected. The total number of macroinvertebrate organisms collected was 1,868,690, and the total mean annual density was 19,264/100 m^3.

In the 2005-2006 survey, a total of 23,802 specimens of finfish were taken in 215 entrainment abundance collections at BLE between May 10, 2005 and May 31, 2006. This total included 18,075 eggs, 4,669 larvae, 1002 juveniles, 48 adults, and 8 unidentifiable fish. The entrainment collection represented at least 38 species and 21 families of finfish. At least 94 taxa of shellfish and macroinvertebrates were taken in the same 215 entrainment samples during 2005 and 2006. Those taxa represent a total of 2,113,062 organisms with a total mean annual density of 19,157/100 m^3. Again, because entrainment densities were calculated for the 1988-1989 study and the 2005-2006 study, a comparison could be made based on the flow conditions described previously. The following table lists entrained species by abundance:

Current Entrainment estimates for RIS based on estimated entrainment densities from the 1988-1989 and 2005-2006 Entrainment Monitoring Programs at BLE.

Species	**Age Class of Finfish or Length Class of Blue Crab**	**Annual Impingement Mortality** (Number of organisms per year) 1988-1989	**Annual Impingement Mortality** (Number of organisms per year) 2005-2006
Bay Anchovy	Egg	2,418,986,536	172,976,708
	Larvae	245,515,707	84,909,377
	Juvenile	0	6,606,219
	Age 1 and Older	73,335	142,445
Atlantic Menhaden	Egg	772,401	4,030,926
	Larvae	205,472	8,242,949
	Juvenile	0	498,797
	Age 1 and Older	0	0
Atlantic Silverside	Egg	2,340,198	0
	Larvae	302,702,914	3,536,268
	Juvenile	0	371,825
	Age 1 and Older	208,080	403,538
Atlantic Croaker	Egg	0	0
	Larvae	43,040	6,417,532
	Juvenile	0	5,001,436
	Age 1 and Older	0	0
Weakfish	Egg	871,165	4,578,464
	Larvae	15,091,401	1,946,387
	Juvenile	0	275,215
	Age 1 and Older	0	0
White Perch	Egg	0	0
	Larvae	0	0
	Juvenile	0	0
	Age 1 and Older	0	0
Blue Crab	Egg	0	554,772,006
	Larvae	60,952,302	1,059,487,204
	Juvenile	0	4,937,806
	Age 1 and Older	4,942,079	29,185
All RIS	All Life Stages	3,052,704,630	1,919,164,287

v. Comparison of Results:

Data collected during the 1988-1989 and 2005-2006 impingement and entrainment programs were used to characterize annual, seasonal, and diel variations in impingement mortality and entrainment of RIS at BLE. These

characterizations were based on estimates of impingement and entrainment densities (i.e. number of organisms per unit volume of cooling water flow), and the assumption of constant cooling water flow rates (on annual, seasonal, and daily bases). Impingement data for each finfish species were analyzed by age-class and entrainment data for each species were analyzed by life stage. The following is a summary of the results described in the report:

Annual Variation by Age

- Impingement: The impingement results did not show any clear trends regarding annual variation by age. For example, in the 1988-1989 study more "1 Year" age class Bay Anchovy were impinged than "0 Year" age class, but during the 2005-2006 study more "0 Year" age class Bay Anchovy were impinged than "1 Year" age class. The same flip-flop occurred for Atlantic Menhaden, Atlantic Silverside, and Weakfish.

- Entrainment: For Atlantic Menhaden, Atlantic Silverside, Atlantic Croaker and Blue Crab the number of organisms entrained was consistent across life stages. During the 1988-1989 study, Bay Anchovy eggs were the most entrained life stage but during the 2005-2006 study more juvenile Bay Anchovy were impinged. During the 1988-1989 study, Weakfish larvae were the most entrained life stage, but during the 2005-2006 study juveniles were the most entrained. No clear trends were apparent in annual variation by age for entrained RIS.

Seasonal Variation

- Impingement: Bay Anchovy, Atlantic Silverside, and Blue Crab all experienced high rates of impingement in May. The rate of impingement for Weakfish peaked in June, August and September. The most Atlantic Menhaden were impinged between September and February. Impingement for Atlantic Croaker peaked in November and December, while the impingement rate for White Perch was highest in December and January. There is not a consistent pattern for impingement rates that can be applied to all the RIS.

- Entrainment: As with impingement, there was not a consistent pattern for seasonal levels of entrainment for RIS. Bay Anchovy entrainment was highest from May to November. Atlantic Menhaden entrainment peaked in May and June, then again in November and December. Atlantic Silverside entrainment was highest from May to June, but Atlantic Croaker was entrained the most from October to February. Entrainment for both Weakfish and Blue Crab peaked in June.

Diel Variation

- Impingement: In the 316(b) Report diel variation is divided into four Diel Periods, with Period 1 extending from 12:00 midnight through 5:59 am, Period 2 from 6:00 am through 11:59 am, Period 3 from 12:00 noon through 5:59 pm, and Period 4 from 6:00 pm through 11:59 pm. For five of the eight RIS, the lowest levels of impingement were observed during Diel Period 2 (6:00 am through 11:59 am). The diel period demonstrating the highest level of impingement varied by species.

- Entrainment: Entrainment levels followed a similar diel pattern to impingement levels. Atlantic Croaker larvae was the only species and life stage to experience its highest levels of entrainment during Diel Period 2. All other RIS experienced the highest levels of entrainment during Diel Periods 1 and 4.

vi. Description of Intake Protection Technologies:

In the February 2008 316(b) Report, AKRF states that under current conditions at BLE, impingement mortality is reduced by a combination of a fish return system, closed-cycle cooling for Unit 3, and operational measures that result in intake flow reductions. The fish return system reduced impingement mortality by returning impinged fish and shellfish (notably blue crab) alive to GEHB. Closed-cycle cooling for Unit 3 reduced the need for additional cooling water flow and the associated increase in velocity through the intake screens. Operational measures such as seasonal flow reductions reduce the number of days that cooling water is drawn through the intake screens and reduce flow velocity through the screens.

Unit 3 at BLE currently operates with a cooling water tower – a closed-cycle cooling system – that has a design cooling water flow rate (for evaporation make-up and auxiliary cooling) of 15 MGD (10,400 gpm). Cooling tower make-up water for Unit 3 is withdrawn using BLE's common intake structure. If Unit 3 had been designed to operate with a once-through cooling water system, its flow rate would have been approximately 152.5 MGS (105,880 gpm). The combined flow for Units 1-3, with Unit 3 operating as a closed-cycle cooling system, is 294.3 MGS (204,400 gpm). If Unit 3 operated with a once-through cooling water system, the combined flow for Units 1,2 and 3 would have been 431.8 MGD (299,880 gpm). The flow reduction associated with Unit 4 operating with closed-cycle cooling rather than once-through cooling is approximately 137.5 MGD (95,480 gpm).

D. Section 316(b) Best Technology Available Determination

1. Department's Conclusions Regarding Impingement and Entrainment Data

To evaluate Section 316(b) of the Clean Water Act the Department refers to impingement and entrainment data sets. This data reflects the direct effects of the Station. An assessment of these effects is integral to defining alternatives to minimizing these losses where the Department evaluated both recent and historic data sets. Based on this review, the Department concludes the following:

- Consistent with previous Section 316(b) determinations, two species of forage fish, the Atlantic silverside and bay anchovy, are impinged and entrained in the greatest number.

- A comparison of the recent data to the historical data shows that the magnitude of the number of species impinged and entrained varies for most species.

- Impingement losses for blue crab are significant in both recent and historical data. Survivability studies for blue crab conducted in 1988 to 1989 shows a mean percent survival of 92.7% even without fish buckets on the traveling screens.

- The Department contends that it is reasonable to assume that a reduction in water withdrawal will have a directly proportional reduction in impingement and entrainment mortality. As a result, the reduction in flow after repowering of approximately 43% will have a significant reduction in impingement and entrainment mortalities.

2. Best Technology Available Determination In Accordance with Best Professional Judgement

As noted previously, EPA is required to finalize Section 316(b) rules by June 27, 2013 (http://water.epa.gov/lawsregs/lawsguidance/cwa/316b/). Since the EPA rule requirements are not yet known, states are required to issue Section 316(b) determinations in accordance with BPJ until such time as the new Section 316(b) regulations are finalized.

There are three components to the regulation proposed on April 20, 2011. First, most facilities would be subject to an upper limit on how many fish can be killed by the facility through impingement. The facility would determine which technology would be best suited to meet this limit, including whether to reduce its intake velocity to 0.5 feet per second. Facilities that withdraw at least 125 million gallons per day of intake water would be required to conduct studies to determine whether and what site-specific entrainment mortality controls, if any, would be required. Third, new units at an existing facility that are built to increase the generating capacity of the facility would be required to reduce the intake flow to a level similar to a closed cycle, recirculation system. The third component does not apply to BLE because Unit 4 utilizes the existing Unit 2 steam turbine, which is associated with the existing circulating cooling water intake and discharge. Additionally, after repowering the overall volume of water withdrawn from the GEHB will decrease. Specifically, the current water intake from GEHB is 294 MGD and will decrease to 168 MGD after repowering. The Department recognizes that after repowering, BLE will operate at an intake flow slightly in excess of the 125 MGD threshold for site-specific entrainment mortality controls.

With respect to compliance dates in the proposed rule, EPA has stated that the compliance dates won't be relevant until EPA issues a final rule. When the final rule is effective, technologies to meet the impingement requirements of the rule would have to be implemented as soon as possible but within eight years at the latest. Larger facilities have to perform some additional studies but that will be determined by their permitting authority.

The Department has repeatedly gone on record through its comments on EPA's rule making effort as well as through individual permit actions that Ristroph traveling screens are a proven and effective technology to minimize impingement mortality. Constant rotation and screen washes serve to reduce impingement mortality by assisting organisms into the fish return system, which should discharge below the tide level. Modified Ristroph traveling screens are particularly effective in reducing impingement mortality for blue crab, a species which has the highest impingement rate at BLE.

While the Department recognizes the uncertainty associated with the proposed rule at this time, the Department would like to expedite compliance with the impingement mortality standard. As a result, the Department is requiring BLE to submit an Impingement Alternatives Analysis for BLE within 15 months of the effective date of this renewal permit. The purpose of this study is for RC Cape May Holdings LLC to evaluate and analyze a potential alternative for reducing impingement mortality at BLE with a focus on improved screens with fish buckets. The feasibility study shall address the following factors:

- Replacement of the existing screens with Ristroph screens having a dual spraywash system (high-and-low-pressure). The screens shall have fish lifting buckets to hold the fish in water as they are lifted to the low-pressure spraywash removal system. The screen size shall be optimized to minimize fish mortality and the screen mesh shall have a smooth face. These screens shall be operated continuously exclusive of periods of maintenance requirements.

- Installation of a fish return system for the intake structure that is designed and constructed in consideration of the following factors: 1) using a fiberglass composite or a similar non-abrasive material that will be added to the full length of the interior surface trough of the fish return; 2) material that will reduce abrasion and obstructions to fish; 3) sufficient capacity, flow volume and water level to facilitate safe return of impinged organisms to the GEHB; and 4) the fish return conveyance terminus is designed to be submerged at all tidal stages on a year-round basis.

- Inclusion of scoping cost estimates for alternatives and a project implementation schedule.

The permittee shall submit the Impingement Alternatives Analysis on or before EDP + 15 months. The permittee shall submit these technical findings to the Department as indicated in Part IV. Upon receipt of this information, the Department will evaluate the findings in concert with the final EPA regulations and will reopen the permit to incorporate permit conditions pursuant to N.J.A.C. 7:14A-16.4.

In consideration of the regulatory and technical information available at this time, the Department hereby determines that conducting an Impingement Alternatives Analysis to assess the installation of modified Ristroph traveling screens as well as a fish return system at BLE constitutes BTA based on BPJ in accordance with Section 316(b) of the Clean Water Act.

8 Section 316(a) Determination and Information

A. Regulatory Background – Thermal Surface Water Quality Standards, Section 316(a) and Federal Regulations

The SWQS at N.J.A.C. 7:9B-1.5(c).8.i. state the following with respect to temperature criteria for SE waters:

8. Temperature criteria at N.J.A.C. 7:9B-1.14(d) apply unless an alternative effluent limitation is approved in accordance with Section 316(a) of the Clean Water Act, 33 U.S.C. 1326(a).

i. Properly treated wastewater discharge shall be deemed in compliance with the temperature criteria if the ambient stream temperature measured outside the regulatory heat dissipation area does not increase by more than:….
(4) 2.2 degrees Celsius in SE and SC waters from September through May.
(5) 0.8 degrees Celsius in SE and SC waters from June through August.

In addition, N.J.A.C. 7:9B-1.5(h)2.i. states the following with respect to heat dissipation areas:

i. Heat dissipation areas shall be established as follows:
(1) For discharges to FW2-NT, FW2-TM, and SE waters, not more than one-quarter (1/4) of the cross section and/or volume of the water body at any time or more than two-thirds (2/3) of the surface from shore to shore at any time.
(2) For discharges to lakes, ponds, reservoirs, bays or coastal waters, the heat dissipation areas shall be developed on a case-by-case basis.
(3) A discharger may be granted a larger heat dissipation area pursuant to 33 U.S.C. 1326(a) Section 316(a) of the Clean Water Act.

Section 316(a) of the Federal Clean Water Act regulates the thermal component of surface water discharges. Specifically, Section 316(a) authorizes variances from thermal SWQS where it is shown that the alternative limit proposed will "assure the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife" in the receiving water. Section 316(a) of the Federal Clean Water Act states, in part:

> ….the Administrator (or if appropriate, the State) may impose an effluent limitation under such sections for such plant, with respect to the thermal component of such discharge (taking into account the interaction of such thermal component with other pollutants), that will assure the protection and propagation of a balanced, indigenous population of shellfish, fish and wildlife in and on that body of water.

In sum, the Department can deviate from the above referenced thermal effluent criteria for point sources and the heat dissipation dimensions provided that the conditions of Section 316(a) of the Clean Water Act are met. In other words, a Section 316(a) determination would override the SWQS thermal criteria.

Federal regulations at 40 CFR Part 125 125.70 – 125.73 (Subpart H – Criteria for Determining Alternative Effluent Limitations Under Section 316(a) of the Act) serve to guide implementation of Section 316(a) of the Clean Water Act. With respect to existing dischargers, 40 CFR 125.73(c) states the following:

(1) Existing discharges may base their demonstration upon the absence of prior appreciable harm in lieu of predictive studies. Any such demonstrations shall show:

(i) That no appreciable harm has resulted from the normal component of the discharge taking into account the interaction of such thermal component with other pollutants and the additive effect of other thermal sources to a balanced, indigenous community of shellfish, fish and wildlife in and on the body of water into which the discharge has been made; or

(ii) That despite the occurrence of such previous harm, the desired alternative effluent limitations (or appropriate modifications thereof) will nevertheless assure the protection and propagation of a balanced, indigenous community of shellfish, fish and wildlife in and on the body of water into which the discharge is made.

(2) In determining whether or not prior appreciable harm has occurred, the Director shall consider the length of time in which the applicant has been discharging and the nature of the discharge.

B. Balanced Indigenous Community

1. Prior Studies

Data collected over the past forty years are available concerning the species composition in GEHB. The United States Fish and Wildlife Service (USFWS) has characterized the ecology of the Estuary and GEHB whereas other data were collected specifically for BLE. While some of these studies were conducted to evaluate the effects of the cooling water intake structure, the data collected on the species entrained or impinged effectively characterize the species composition in the vicinity of the Station and its thermal discharge. Entrainment studies, which collect species capable of passing through the 3/8 inch mesh screens, identify the early life stages (i.e., eggs and larvae) and smaller organisms present in the vicinity of BLE. Impingement studies, which focus on organisms that would be caught on the 3/8 inch screens, identify the juvenile and adult life stages of species present in the vicinity of BLE. Taken together, these studies provide data on the life stages and species present in GEHB. These data show that there have been no major shifts in trophic composition within the biotic community in the vicinity of BLE over the period of time when BLE has been operational.

While dated, the data set reported by the USFWS in 1977 is the most comprehensive. USFWS reported that at least 67 species of fish had been located within the estuary. Atlantic silversides, Atlantic menhaden, bay anchovy, banded killifish, alewife, hogchoker, white perch, white catfish, and winter flounder comprised the most abundant species. At least 32 species of fish have been collected in GEHB the portion of the estuary with the highest diversity of fish species. Anadromous fish, namely blueback herring, alewife, and striped bass spawn in the tributary streams and use the estuary as a juvenile nursery area. Other fish include the anadromous fish hickory shad and Atlantic menhaden as well as the catadromous species American eel. Upstream fish migration in the tributary streams is impeded by obstructions such as dams, which restrict spawning activity to the lower reaches.

As noted previously, BLE has conducted a series of biological monitoring programs over time which show that there has not been a significant change in the biotic community over time. The dominant fish species in entrainment studies were Atlantic silverside, bay anchovy, and windowpane. Unlike the more recent two studies, the 1970s studies did not address entrainment of macroinvertebrates at BLE. Opossum shrimp was the most dominant species on both the 1988-1989 and the 2005-2006 studies. There has been a change in the species composition of entrained macroinvertebrates; the commercially and recreationally important blue crab has become a more dominant species in the most recent studies. Opossum shrimp, *Ampelisca spp*, and *Corophium spp* were collected in large numbers in both the later studies (1988-1989 and 2005-2006). Bay anchovy, oyster toadfish, northern pipefish, white perch and Atlantic silverside were among the most dominant fish species impinged during the three study periods. Consistent with coast-wide trends, spot were among the most prevalent species in the 1980s studies whereas Atlantic croaker was more prevalent in the most recent studies.

While there have been some shifts in relative abundance among the dominant species over time, such changes are typical in natural systems. Moreover, the changes are consistent with the continuation and propagation of a balanced biotic community. There have been no increases in thermally tolerant species in the vicinity of BLE and no indications of heat or cold shock.

2. Representative Important Species and Threatened and Endangered Species

Seven species were identified as Representative Important Species (RIS) for the Station for the purposes of the Section 316(a) demonstration. These species are as follows:

- Bay Anchovy
- Atlantic menhaden
- Atlantic silverside
- Atlantic croaker
- Weakfish
- White perch
- Blue crab

The State of New Jersey lists seven species of threatened or endangered marine/estuarine wildlife that could potentially be affected by the cooling water intake structure. These include four species of endangered marine turtles (Atlantic hawksbill, Leatherback, Loggerhead, and Kemp's Ridley)*;* one species of a threatened marine turtle (Atlantic green) and two species of endangered fish (shortnose sturgeon and Atlantic sturgeon). Of these seven species, the marine turtles could be present in the GEHB during summer and fall months, most likely as transient adults. Shortnose sturgeons are amphidromous, spending most of their lives in deepwater areas of their natal rivers, and only rarely entering nearby coastal waters. Most shortnose sturgeon in the mid-Atlantic region occur in oligohaline and freshwater reaches of large estuaries such as the Delaware and Hudson. Atlantic sturgeon spawn in freshwater reaches of large estuaries and are typically found in coastal waters as juveniles and adults, generally in shallow nearshore areas dominated by gravel and sand substrates. During the monitoring efforts in 1988-1989 and 2005-2006, no sturgeons or marine sea turtles were encountered at BLE.

3. Thermal Effects on the RIS

The following information provides a description as to how the RIS respond to heat and temperature:

- The bay anchovy is a forage species that occurs throughout GEHB and is widely tolerant of salinity and temperature. Spawning typically occurs from May to mid-August in estuaries where water temperatures are higher than 35^{o}C (63^{o}F) and salinities greater than 20 parts per thousand (ppt). Oxygen levels below 3.0 mg/L can be lethal to eggs and larvae and DO below 2.0 mg/1 is critical. Some spawning occurs throughout much of GEHB, though egg hatching appears to be reduced in lower salinity waters. Adult bay anchovy prefer temperatures ranging from 8.3^{o}C to 32.2^{o}C (47^{o}F to 90^{o}F).

  Heat shock studies were conducted on adult bay anchovy that were acclimated to temperatures of 10^{o}C to 21.1^{o}C (50^{o}F to 70^{o}F) and salinities of 27 to 29 ppt. Results indicated 0 to 40% mortality for ΔTs of 0^{o}C – 7^{o}C (0^{o}F – 12.6^{o}F) and 60 to 100% mortalities for ΔTs of 8^{o}C - 17^{o}C (14.4^{o}F - 30.6^{o}F). Cold shock studies were conducted on juvenile and adult bay anchovy that were acclimated to 59 to 72^{o}F and 26 to 30 ppt, then held at temperatures decreased by up to 15^{o}C. Results indicated little or no mortality for temperature decreases up to 7^{o}C (12.6^{o}F), but 60 to 100% mortality for temperature decreases of 8 – 15^{o}C (14.4^{o}F-27^{o}F).

- Atlantic menhaden is a forage species and a member of the herring family. Peak spawning in the Middle and North Atlantic regions occurs in the spring and fall. Juveniles remain in estuaries for the first year of their lives then migrate toward the coastal ocean. The critical thermal maximum for larval menhaden during spring ambient temperatures of 11.1 ^{o}C to 12.2 ^{o}C (52^{o}F to 54^{o}F) is approximately 28.9 ^{o}C to 29.4 ^{o}C (84^{o}F to 85^{o}F). The upper avoidance temperature for juvenile menhaden is approximately 32.8 ^{o}C (91^{o}F) at an acclimation temperature of 30 ^{o}C (86^{o}F).

- The Atlantic silverside is an important forage species that spawns in the vegetated portion of marshes at high tide. Spawning water temperatures typically range from 27 to 36^{o}F (15^{o} to 20^{o}C). The upper avoidance temperature for juvenile Atlantic silverside is approximately 35^{o}C (95^{o}F) at an acclimation temperature of 28.9^{o}C (84^{o}F). The critical thermal maximum is approximately 35^{o}C (95^{o}F).

- The presence of Atlantic croaker in GEHB is highly influenced by overall stock abundance and climatological conditions, since GEHB is in the northern end of the geographic range for this species. Atlantic croaker generally spawn in coastal oceanic waters. In tests that examined Atlantic croaker that were acclimated to temperatures of 6 ^{o}C-27 ^{o}C (42.8^{o}F-80.6 ^{o}F) and salinities of 3.5-10 ppt, the species generally preferred temperatures 0.3-12^{o}C (0.54 ^{o}F-21.6 ^{o}F) higher than acclimation temperatures.

  Heat shock effects were examined for juvenile Atlantic croaker that were acclimated at 6-27^{o}C (42.8-80.6 ^{o}F). Results showed that specimens acclimated to 14 ^{o}C and subjected to a ΔT of 13.5 ^{o}C (24.3 ^{o}F) resulted in 100% mortality, but ΔT shocks up to 10.5 ^{o}C (18.9 ^{o}F) resulted in little or no mortality. Cold shock was examined for juvenile Atlantic croaker at salinities of 5-10 ppt and acclimated to 3-27 ^{o}C (37.4-80.6 ^{o}F). Specimens

acclimated to 27 °C (80.6F) experienced no mortality when subjected to a ΔT drop of 11 °C, but specimens acclimated to 4 °C (39.2 °F) and subjected to a Δ2°C (3.6°F) drop experienced 100% mortality.

- Adult weakfish are common in the GEHB from late spring through mid-fall. Spawning is known to occur from mid-May to mid-September in the lower Delaware Bay, where salinities range from 12 to 35 ppt. Optimal growth of juvenile weakfish occurs at a salinity of 20 ppt and water temperatures of 84°F (47°C).
  In temperature preference experiments, weakfish that were acclimated to temperatures between 25°C-30°C (77°F-86°F), exhibited a mean avoidance temperature of 31.1°C (88°F). The critical thermal maximum (CTM) was examined for larvae, and found to increase as the age of the larvae increased. The CTM temperature for larvae 4-16 days old ranged from 33.1°C-33.8°C (91.6°F-92.8°F), while the CTM for specimens aged 17 days was 35.5°C (95.9°F).

  Cold shock tests on weakfish eggs that were acclimated to 22.5°C (72.5°F) experienced no mortality after 3 minute exposure at any ΔT. When exposure time was increased to 90 minutes with a ΔT of 14°C (25.2°F), mortality rose to 94%.

- White Perch are year-round inhabitants in many New Jersey estuaries. Spawning generally occurs from early April through early June in freshwater areas of estuaries and in tidal tributaries. Optimal hatching success occurs at water temperatures of 57°F to 61°F. The results from temperature preference studies indicate that juveniles acclimated at 10°C (50°F) or greater exhibited a mean preferred temperature of 31.2°C (88.2°F), while the mean preferred temperature for adults was 26.8°C (80.2°F). In thermal tolerance studies, the upper limit for fish acclimatized to 25°C-26°C (77°F-78.8°F) ranged from 34.2°C-34.7°C (93.6°F-94.5°F).

  Cold shock was examined for juvenile white perch that were acclimated to temperatures of 5°C-30°C (41°F-86°F) and shocked by temperature decreases ranging from 2°C-24°C (3.6°F-43.2°F). When acclimated to 12°C (53.6°F) or less, less than 20% mortality resulted from a temperature decrease down to 0°C (32°F). However, when acclimated to a temperature of 12.5°C (54.5°F), 100% mortality resulted when the temperature was decreased to 0°C. When acclimated to 26°C (78.8°F) and higher, 100% mortality was observed when temperature was decreased to 19°C (34.2°F).

- Blue crab naturally occur in the western Atlantic Ocean from Nova Scotia to Argentina. Their larvae require salinities of at least 20 ppt for survival. Juvenile and adult crabs are able to tolerate lower salinities, even freshwater, in addition to saline habitats. The upper lethal temperature for juvenile and adult blue crab is 36.7°C to 38.9°C (98°F-102°F). The upper avoidance temperature for blue crabs acclimated to 25°C is between 32.8°C and 37.2°C (91°F-99°F).

In reviewing this information, it is important to consider that the associated velocity of the discharge would make it unlikely for the RIS to reside in the hottest areas of the plume for any period of time. The hydrodynamics of GEHB contribute to mixing and heat dissipation. In addition, many juvenile and adult species with swimming capability can actively avoid the thermal plume.

C. Section 316(a) Determination in 2005 Permit

As summarized in the January 11, 2005 permit, a number of studies were performed from 1971 to 1991 which pertain to both Sections 316(a) and 316(b). A summary of the findings of a survey performed by the Department and surveys conducted for Atlantic City Electric in the early 1970's served to characterize the zooplankton and fish of GEHB. These findings showed that the system supports typically estuarine plankton and fish populations. Resident fish include atlantic silverside, white perch, striped killifish, mummichog, bay anchovy and others; migratory fish include northern pipefish, weakfish, spot and others. Organisms of sport and commercial value in the bay include white perch, weakfish and blue crab.

The January 11, 2005 NJPDES renewal permit requires that thermal discharges from BLE comply with cooling water system limitations which are the same or more stringent than the limitations in the permit effective January 1, 1994. Both the 1994 and 2005 permits contained effluent limitations of 38.3 degrees Celsius at DSN 009A and 010A in

accordance with N.J.A.C. 7:9B-1.14(d)11.iv. In addition, the 1994 and 2005 permit contained heat loading limitations for the plant which are based on the heat contribution from DSNs 009 and 010. The 2005 permit contained a statement that thermal water quality will not be degraded as compliance with the permit will result in ambient water quality that is the same or better than the level of quality which would be maintained under the 1994 permit.

As stated in the January 11, 2005 permit:

> Based on a review of the current data and modeling pertaining to the thermal plume as well as the biothermal assessment, the Department has determined that a variance under Section 316(a) is warranted. A thermal discharge at the Station, in accordance with the proposed temperature and heat limitations, is expected to assure the protection and propagation of the balanced indigenous populations. These effluent limitations for temperature and heat are set forth in Part III.

In addition, at the time of the 2005 permit renewal, the facility was contemplating cessation of its operations. At that time the effect of the Section 316(b) regulations was uncertain. While these regulations are geared towards intake protection, there is a linkage to thermal effects given that the implementation of Section 316(b) regulations could result in potential flow reductions.

D. Current and Projected Operating Conditions

1. Current Operating Conditions

The following is a summary of data for all three outfalls that are associated with thermal loading from power production:

DSN 001A (Cooling Tower Blowdown for Unit 3)

2008-2009	**Flow (MGD)**		**Effluent Temp. (°C)**		**Heat (MBTU/hr)**	
	Average	**Maximum**	**Average**	**Maximum**	**Average**	**Maximum**
September-May	0.046	1.93	21.92	34	0.216	12.61
June-August	0.064	2.04	31.1	33	0.15	8.27
Average	**0.055**	**1.99**	**26.51**	**33.5**	**0.183**	**10.44**

2009-2010	**Flow (MGD)**		**Effluent Temp. (°C)**		**Heat (MBTU/hr)**	
	Average	**Maximum**	**Average**	**Maximum**	**Average**	**Maximum**
September-May	NODI	NODI	NODI	NODI	NODI	NODI
June-August	0.785	4.28	26.45	35	0.56	14.7
Average	**0.785**	**4.28**	**26.45**	**35**	**0.56**	**14.7**

2010-2011	**Flow (MGD)**		**Effluent Temp. (°C)**		**Heat (MBTU/hr)**	
	Average	**Maximum**	**Average**	**Maximum**	**Average**	**Maximum**
September-May	0.51	2.06	27	28	0.41	5.16
June-August	1.473	3.75	27.47	34	2.45	7.82
Average	**0.992**	**2.905**	**27.24**	**31**	**1.43**	**6.49**

2011-2012	**Flow (MGD)**		**Effluent Temp. (°C)**		**Heat (MBTU/hr)**	
	Average	**Maximum**	**Average**	**Maximum**	**Average**	**Maximum**
September-May	NODI	NODI	NODI	NODI	NODI	NODI
June-August	2.62	3.76	27.3	31.4	4	14.7
Average	**2.62**	**3.76**	**27.3**	**31.4**	**4**	**14.7**

Conclusions for DSN 001A for years 2008 through 2012:

- Actual maximum flow discharge values fluctuate from 1.93 to 4.28 MGD which is significantly less than the design flow of 15 MGD.
- Actual maximum heat loadings fluctuate between 5.16 and 14.7 MBTU/Hour which is significantly less than the limit of 50 MBTU/Hr.

DSN 009A (Once-through Cooling Water for Unit 1)

2008-2009	Flow (MGD)		Effluent Temp. (°C)		Heat (MBTU/hr)	
	Average	Maximum	Average	Maximum	Average	Maximum
September-May	62.8	125.9	21.65	34	425.55	911.6
June-August	44.57	125.9	29.9	34.6	223.57	748
Average	**53.69**	**125.9**	**25.78**	**36.3**	**324.56**	**829.8**

2009-2010	Flow (MGD)		Effluent Temp. (°C)		Heat (MBTU/hr)	
	Average	Maximum	Average	Maximum	Average	Maximum
September-May	11.8	122	24.6	27.6	314.7	887.4
June-August	71.1	127.4	29.6	33.9	255.2	722.8
Average	**41.5**	**124.7**	**27.1**	**30.8**	**285**	**805.1**

2010-2011	Flow (MGD)		Effluent Temp. (°C)		Heat (MBTU/hr)	
	Average	Maximum	Average	Maximum	Average	Maximum
September-May	16.6	158	23.3	32	575.3	967
June-August	68	128.9	30.6	34.1	424.4	788
Average	**42.3**	**143.5**	**27**	**33.1**	**499.9**	**878**

2011-2012	Flow (MGD)		Effluent Temp. (°C)		Heat (MBTU/hr)	
	Average	Maximum	Average	Maximum	Average	Maximum
September-May	94	123.5	24.1	25.8	96.4	247.2
June-August	81.8	128.9	29.7	34.3	276.93	934.5
Average	**87.9**	**126.2**	**26.9**	**30.1**	**186.67**	**590.9**

Conclusions for DSN 009A for years 2008 through 2012:

- Average flow discharge values are significantly less than design flow of 126.7 MGD for all four years.
- Actual maximum heat loadings fluctuate between 247.2 MBTU/Hour and 967 MBTU/Hour.

DSN 010A (Once-through Cooling water for Unit 2)

2008-2009	Flow (MGD)		Effluent Temp. (°C)		Heat (MBTU/hr)	
	Average	Maximum	Average	Maximum	Average	Maximum
September-May	51.2	134.5	13.93	32.4	188.83	911.6
June-August	64.5	136.2	22.7	27.8	223.57	748
Average	**57.9**	**135.4**	**18.3**	**30.1**	**206.2**	**829.8**

2009-2010	Flow (MGD)		Effluent Temp. (°C)		Heat (MBTU/hr)	
	Average	Maximum	Average	Maximum	Average	Maximum
September-May	50.1	136.2	10.76	28.1	101.59	887.4
June-August	96.9	136.2	22.3	30.3	255.2	722
Average	**73.5**	**136.2**	**16.53**	**29.2**	**178.4**	**804.7**

2010-2011	Flow (MGD)		Effluent Temp. (°C)		Heat (MBTU/hr)	
	Average	Maximum	Average	Maximum	Average	Maximum
September-May	65.7	138	17.71	32	482.2	1514
June-August	108.8	137.8	30.3	36	395	1009
Average	**87.3**	**137.9**	**24.01**	**34**	**438.6**	**1262**

2011-2012	Flow (MGD)		Effluent Temp. (°C)		Heat (MBTU/hr)	
	Average	Maximum	Average	Maximum	Average	Maximum
September-May	78.1	137.8	13.67	26.2	123.8	301.4
June-August	84	137.8	28.8	33	205.37	934.5
Average	**81.05**	**137.8**	**21.24**	**29.6**	**164.59**	**618**

Conclusions for DSN 010A for years 2008 through 2012:

- Average flow discharge values are significantly less than the design flow of 152.6 MGD.
- Actual maximum heat loadings fluctuate between 301.4 MBTU/Hour and 1514 MBTU/Hour.

Based on this review, the Department can conclude that the current operating characteristics indicate that the plant discharges less flow than the design flow resulting in a commensurate reduction in heat loading and thermal discharge.

2. Summary of Operating Conditions After Repowering:

In the 2013 NJPDES Permit Renewal application, the permittee included the following table to illustrate the reduction in cooling water flows as a result of repowering:

316(a) Variance Summary Table Current and Anticipated Max Cooling Water Flows (Million Gallons Per Day – MGD)			
Generating Units	**Current Max (MGD)**	**Future Max (MGD)**	**Associated Outfall**
Unit 1 (to be removed)	126.7	0.0	DSN 009A
Unit 2*	152.6	152.6	DSN 010A
Unit 3	15	15	DSN 001A
Totals	294.3	167.6	
Project Net Decrease	**126.7 MGD or 43%**		

* There are two pumps that can operate at two settings (pump rates) at the Unit 2 intake. The higher setting allows for the withdrawal rate to be increased to 126,000 gpm (181.4 MGD) for short durations. Using the higher setting on both pumps can occasionally be used to mitigate the temperature difference and maximum temperature of the discharge.

3. Characterization of the Modified Thermal Plume:

As noted previously, repowering the Station will affect the properties of the thermal discharge. The thermal plume is defined as the resultant increase in delta temperature above the ambient receiving waters as the once through cooling water is transported, diluted and dissipated. To illustrate these changes, the permittee has provided a conceptual diagram of the plume for summer conditions where the thermal plume is defined as the area where temperature is increased by more than 1.5 degrees Fahrenheit. For purposes of this screening exercise, the flow rate was assumed to

be approximately 290 MGD, and the temperature differential was assumed to be 16 degrees Fahrenheit. For the repowered conditions, the screening exercise assumed a flow rate of 167 MGD from outfall DSN 010 with a temperature differential of 20 degrees Fahrenheit.

As part of this characterization, simplified calculations were applied to estimate the modifications to the thermal plume as a result of repowering. Mixing of a thermal plume occurs first in a near-field zone where the momentum of the discharge dominates, and then transitions to a far-field zone where mixing occurs as a result of the ambient flow field and the density differences between the discharge and receiving water. The CORMIX Model was applied to approximate the near-field and develop first order estimates for the far-field. CORMIX showed that the extent of near-field momentum induced mixing is highly variable depending on the phase of the tide and discharge scenario. Due to the reversing tidal currents in GEHB, CORMIX was unable to adequately resolve the far-field. CORMIX results indicated the time required to achieve steady-state mixing is typically longer than the time to tidal reversal; therefore, a separate far-field calculation was required to approximate the far-field plume dimensions subject to reversing tidal currents.

A particle tracking calculation was used to characterize the far-field plume. In addition to the flow rate and heat associated with the discharge, a representative velocity field was required as input to the particle tracking model. The velocity field was calculated using an analytical flow field streamline model. The streamline model produced input for the particle tracking model, including: discharge velocities near the end of the near-field; and ambient tidal current velocities in the receiving waterbody. Using the combined inputs, the particle tracking model was applied to simulate the thermal plume with the receiving waterbody for current plant design as compared to repowered conditions.

The aerial extent of the thermal plume calculated for the Repowering Project was subtracted from the calculation for existing conditions, specifically for the summer scenario. Results showed a net 26 to 32% reduction in the area of the plume as measured in the 1.5 degree Fahrenheit isotherm for the proposed condition. The expected reduction in the plume dimension is primarily a result of the reduced flow rate.

While the CORMIX model for the summer conditions predicted that the overall size of the thermal plume will be smaller, the zone of initial dilution (ZID) with the highest delta ΔTs is slightly warmer and larger under the repowering project conditions. While temperatures within the ZID under the most extreme conditions would be beyond the thermal tolerances for RIS, the ZID occupies very small areas within GEHB.

E. Section 316(a) Determination in this Renewal Permit

1. Overview of Decision Criteria:

The station's once-through cooling water discharge increases water temperatures in the bay. Currently the once-through cooling water discharge is returned to the bay through DSNs 009 and 010 whereas the cooling tower blowdown is return to the bay through DSN 001. After repowering, the once-through cooling water discharge will be discharged through DSN 010 and the cooling tower blowdown will continue to be discharged through DSN 001. The once-through cooling water discharge through DSN 009 will be eliminated. The size and characteristics of the thermal plume during current conditions as well as after repowering are dependent on the thermal characteristics of the cooling water discharge, the station's net generation over several days, the hydrodynamics of the bay and meteorological conditions. Simplified thermal modeling results show a net reduction in the overall area of the plume from approximately 26 to 32% for the repowered plant condition as compared to the existing plant configuration.

In evaluating the renewal of the section 316(a) variance, the Department considered the current application, applicable state and federal regulations, and applicable guidance documents. The Department recognizes that the applicant's burden with regard to the renewal of a thermal variance is "to support the continuation of the variance" and does not require the same level of proof as an application for an initial variance in accordance with 40 CFR 125.72(c).

One of the factors that the Department considered regarding this request is whether or not operating characteristics have changed. Specifically, the Department evaluated existing discharge monitoring report data with respect to flow, temperature and heat as well as modeling estimates. The Department also reviewed available information with respect to the balanced indigenous community and the effects of the plume on such.

2. Section 316(a) Determination

With respect to recent and current plant operations, the Department recognizes that the Station's operations and the resulting physical thermal plume have been below the design flow for DSNs 001A, 009A and 010A. While the current heat loading limitations for the Station have been retained from the existing permit, the overall thermal contribution from the Station will decrease from the existing plant configuration based on the elimination of any heat loading from DSN 009A after repowering. In addition, the effluent temperature and temperature differential limitations for DSN 010A for September through May have been retained from the existing permit. However, with respect to the period from June through August for DSN 010A, the Department is imposing a temperature differential limit of 11.0 degrees Celsius as a daily maximum and an effluent temperature limit of 40.5 degrees Celsius as a daily maximum. This change is necessary since higher temperatures will be realized as a result of the use of the duct burners as well as the use of the steam turbine bypass. This operating scenario will not be continuous because the use of the duct burners is limited by the Title V Air Permit and the steam turbine bypass only operates for a few hours during each plant startup, shutdown or infrequent turbine transients. While temperatures within the ZID may at times be greater as compared to the current plant configuration, the ZID occupies very small areas within GEHB and is expected to have minimal effect on aquatic organisms in GEHB beyond the effects considered in prior Section 316(a) assessments.

Based on the regulations at 40 CFR Part 125.73(c), the Department has determined that a variance under Section 316(a) is warranted in accordance with Section 316(a) of the Clean Water Act. This variance is based on the Department's findings that: (1) the operating conditions for years 2008 through 2010 are below the bounds of the operating conditions at the time of the last 2005 variance; (2) the repowered operating conditions and closure of Unit 1 will result in a significant discharge flow reduction; and (3) the overall heat loading limits from the station have been retained. As a result, the Department has determined that a thermal discharge at the Station, in accordance with the proposed temperature and heat limitations, is expected to assure the protection and propagation of the balanced indigenous population.

However, given the changes in the thermal plume characteristics, the Department is hereby requiring updated CORMIX or other appropriate modeling for the thermal plume after repowering has occurred. The purpose of this modeling is to better define the thermal plume once repowering has occurred given the change in operating activities. This condition has been included in Part IV.

9 Type and Quantity of the Wastes or Pollutants:

The Permit Summary Table near the end of this fact sheet contains a summary of the quantity and quality of pollutants treated and discharged from the facility and the proposed effluent limitations.

10 Summary of Permit Conditions:

The proposed effluent limitations and other pertinent information regarding the draft permit are described below:

A. Basis for Effluent Limitations and Permit Conditions - General

The effluent limitations and permit conditions in this permit have been developed to ensure compliance with the following, as applicable:

1. NJPDES Regulations (N.J.A.C. 7:14A),
2. New Jersey Surface Water Quality Standards (N.J.A.C. 7:9B),
3. New Jersey's 2010 Integrated Water Quality Monitoring and Assessment Report (includes 305(b) Report and 303(d) List),
4. Existing permit limitations in accordance with N.J.A.C. 7:14A-13.19 and 40 CFR 122.44 (antibacksliding requirements),
5. Permit limitations in accordance with N.J.A.C. 7:9B-1.5(d) (antidegradation requirements),

6. Statewide Water Quality Management Planning Rules (N.J.A.C. 7:15),
7. Sludge Quality Assurance Regulations (N.J.A.C. 7:14C),
8. Technology Based Treatment Requirements or Effluent Limitation Guidelines Requirements (N.J.A.C. 7:14A-13.2 to 13.4).

Effluent Limitation Guidelines (ELGs) are applicable to this facility in accordance with 40 CFR 423, for the Steam Electric Power Generating ("Steam Electric") Point Source Category.

Technology based limitations are authorized by Section 301 of the Clean Water Act, 40 CFR 122, N.J.S.A. 58:10A-4, and N.J.A.C. 7:14A-13.2(a)1.ii., 13.3(b), and 13.4. In general, technology based effluent limitations are based on Effluent Limitation Guidelines (ELGs), developed by the USEPA, or on case-by-case limitations developed through a BPJ analysis in cases where ELGs are not available or appropriate. ELGs are minimum technology based requirements applicable on a nation-wide basis and are published in 40 CFR Subchapter N. ELGs consider the category of industry that produce common pollutants taking into account the specific factors unique to a particular type of industry (manufacturing process, type and quantity of pollutants generated, types of treatment facilities available to treat the pollutants, etc.). In cases where ELGs are applicable for surface water dischargers, ELG loading limitations are calculated using the specified concentration value and the production information provided by the permittee. BPJ determinations are authorized by Section 402 (a)(1) of the Clean Water Act.

In accordance with N.J.A.C. 7:14A-13.5, Water Quality Based Effluent Limitations (WQBELs) are imposed when it has been determined that the discharge of a pollutant causes an excursion of criteria specified in the New Jersey SWQS, N.J.A.C. 7:9B-1.1 et seq., and the Federal Water Quality Standards, 40 CFR Part 131. WQBELs are authorized by Section 301 of the Clean Water Act, 40 CFR 122, N.J.S.A. 58:10A-4, and N.J.A.C. 7:14A-13.2 and 13.3. The procedures used to develop WQBELs are contained in the State and Federal Standards. Specific procedures, methodologies, and equations are contained in the current USEPA "Technical Support Document for Water Quality-based Toxics Control" (TSD) (EPA- 505/2-90-001) and are referenced in N.J.A.C. 7:14A-13.5 and 13.6.

Expression of all effluent limitations is in accordance with N.J.A.C. 7:14A-13.14 and 13.15.

Whole effluent toxicity is expressed as a minimum as percent effluent.

Loading limitations (kg/day or g/day) are calculated by multiplying the long term average flow value for the respective outfall in million gallons per day (MGD) by the conversion factor of 3.785 (L/gal) and the appropriate concentration limitation (mg/L or µg/L).

B. Basis and Derivation for Effluent Limitations and Monitoring Requirements- Specific

All permit limitations and conditions in this permit action, are equal to or more stringent than those contained in the existing permit action. As a result, this permit action satisfies the federal and state anti-degradation regulations at 40 CFR 131.12 and N.J.A.C. 7:9B-1.5(d), and no further anti-degradation analysis is necessary.

Monitoring frequencies and sample types are in accordance with N.J.A.C. 7:14A-14, unless specified otherwise in the permit. In accordance with N.J.A.C. 7:14A-14.2, the permittee may submit a written request for a modification of the permit to decrease monitoring frequencies for non-limited parameters listed in Part III if site specific conditions indicate the applicability of such a modification.

DSN 001A: Cooling Tower Blowdown

1. Flow:

   Monitoring for **Effluent Flow** is consistent with the existing permit and is required pursuant to N.J.A.C. 7:14A-13.13 and 13.14. Flow shall be reported as a monthly average and a daily maximum with a **calculated** sample type as described in Part IV.

   Monitoring for **Intake Flow** is required in this permit to assess the withdrawal rates from the receiving waters. Withdrawal rates have a direct effect on impingement and entrainment effects. Monitoring for intake flow shall be reported as a monthly average as well as a daily maximum with a **calculated** sample type.

2. Total Organic Carbon (TOC):

   In the existing permit, the discharge limitations and monitoring requirements for TOC and petroleum hydrocarbons were reserved and referenced in Part IV. In this renewal permit, monitoring for TOC is imposed as a monthly average and daily maximum in Part III on the DMR. Monitoring for **Effluent TOC** is consistent with other NJPDES permits that authorize the discharge of cooling tower blowdown. The monitoring frequency of **once per month** is imposed with a **grab** sample type.

3. Total Suspended Solids (TSS):

   The **Net TSS** limits of 30 mg/L as a monthly average and 100 mg/L as a daily maximum are retained from the existing permit in accordance with N.J.A.C. 7:14A-13.19. The calculation procedure is described in Part IV. The monitoring frequency for Net TSS is **once per month**. The permittee is eligible for net TSS limits because the intake water is drawn from the same body of water into which the effluent is discharged. Net limits are imposed in accordance with 40 CFR 122.34 and N.J.A.C. 7:14A-13.4(k).

   Monitoring for **Intake TSS** and **Effluent TSS** is also required as a monthly average and daily maximum to enable the Department to ensure that appropriate calculations are followed. The monitoring frequency is set at **once per month** with a grab sample type.

4. pH:

   The daily minimum and daily maximum **Effluent pH** limitations are consistent with the existing permit and are imposed pursuant to N.J.A.C. 7:14A-13.19. The monitoring frequency of **twice per week** is retained in this renewal permit along with a **grab** sample type.

   A monitoring condition has been retained from the existing permit for **Intake pH** . This monitoring condition is being included to demonstrate compliance with the condition specified in Part IV of this renewal permit. Specifically, this condition specifies that if the inlet pH exceeds 9.0 S.U., the discharge can not exceed the inlet pH. If the inlet pH is less than 6.0 S.U., the discharge can not be less than the inlet pH. Intake pH shall be monitored and reported **twice per week** with a **grab** sample type.

5. Heat and Temperature:

   Intake and effluent monitoring for temperature is retained from the existing permit pursuant to N.J.A.C. 7:14A-13.19. Temperature shall be monitored on a **continuous** basis and reported as a monthly average and a daily maximum with a **metered** sample type.

   Heat limits are retained from the existing permit pursuant to N.J.A.C. 7:14A-13.19. A heat limit of 50 MBTU/Hour on a net basis is imposed as a daily maximum where monthly average monitoring is also required. Heat limits shall be calculated on a **once per day** basis and reported in monthly monitoring report forms. Calculation procedures are specified in Part IV.

6. Petroleum Hydrocarbons:

   As stated in the existing permit, the discharge limitations for petroleum hydrocarbons were referenced in Part IV, where routine monitoring was not required. Inclusion of petroleum hydrocarbons as a narrative requirement is continued in this renewal permit based on the nature of the operations at the Station and is consistent with other NJPDES permits that authorize the discharge of cooling tower blowdown.

   Effluent limitations for petroleum hydrocarbons are consistent with N.J.A.C. 7:14A-12 et seq and are referenced in Part IV. However, should information become available that warrants the need for inclusion of requirements for these parameters, the Department reserves the right to reopen this permit to incorporate any necessary and appropriate limitations.

7. Chlorine Produced Oxidants (CPO):

   The existing permit contained effluent limitations including a daily maximum limit of 1.0 mg/L and a monthly average limit of 0.76 mg/L for CPO. As stated in the existing permit, use of CPO as opposed to free available chlorine (FAC) is appropriate because CPO includes FAC and other fractions. This permit proposes effluent concentration limitations of 0.2 as a monthly average and 0.5 as a daily maximum, based on the Effluent Limitation Guidelines for the Steam Electric Category (40 CFR Section 423) for cooling tower blowdown. A narrative condition is included in Part IV which states that CPO may not be discharged from any operating unit for more than two hours in any one day, consistent with the Steam Electric ELGs. The permittee uses bromine in the cooling tower. As a result, CPO requirements are appropriate since CPO means the sum of free and combined chlorine and bromine as measured by the methods approved under N.J.A.C. 7:18.

   Monitoring shall take place **three times per week** with a **grab** sample type.

8. Foam: The narrative foam permit condition is based on N.J.A.C. 7:14A-12.6.

9. Toxics: In accordance with N.J.A.C. 7:14A-13.6(a), a WQBEL shall be imposed when the Department determines pursuant to N.J.A.C. 7:14A-13.5 that the discharge of a pollutant causes an excursion above a SWQS.

   In order to determine the need for toxic pollutant specific WQBELs, the Department has analyzed all effluent data sets made available to the Department. Acceptable data sets generally consist of, at a minimum, 10 data values including the most recent 2½ years of data collection. A pollutant is considered discharged in "quantifiable amounts" when an exact amount of that pollutant is measured equal to or above the detection level reported by a laboratory analysis (refer to the "Monitoring Report Form Reference (MRF) Manual", which can be found at http://www.nj.gov/dep/dwq/pdf/MRF_Manual.pdf, for further information). The Department has reviewed the most recent data set.

   In the existing permit, net limitations were imposed for Total Chromium (0.2 mg/L as a daily maximum) and Total Zinc (1.0 mg/L as a daily maximum). DMR data indicates that Chromium was not detected in the effluent while Zinc was detected at 0.064 mg/L. These limitations are carried forward in this permit action in accordance with the antibacksliding provisions at N.J.A.C. 7:14A-13.19. The monitoring frequency for Total Chromium and Total Zinc is **once per month** using a **grab** sample type, however, in accordance with 40 CFR Part 423, monitoring for Total Chromium is not required unless the facility uses cooling tower maintenance chemicals containing Chromium.

   In addition to the data recorded on the DMRs for Total Chromium and Total Zinc, several parameters were monitored on the WCR. The following table summarizes the toxics data for DSN 001A:

Parameter	Number of detects	Number of nondetects	Highest detected value (µg/L)	NJ SWQS (µg/L)
Chromium, Total	0	1	N/A	750
Copper	3	1	45.2	3.1
Nickel	2	2	20	22
Selenium	2	2	15	71
Zinc	1	0	64	81

Data is expressed as Total Recoverable for all metals in the table above.

Copper, Nickel, and Selenium and Zinc were detected in the effluent. There is insufficient data available for these four metals in order to calculate a WQBEL, however, the monitoring frequency is increased to **semiannual** using a **grab** sample type. In the existing permit, monitoring for Zinc was only required when the facility used cooling tower maintenance chemicals. The detected data value for Zinc in the above table approaches the level of the NJ SWQS, as a result, monitoring for Zinc is required on a **semiannual** basis regardless of whether cooling tower maintenance chemicals are used.

Regarding the remaining Metals as well as Acids, Base/Neutrals, Pesticides, and Volatiles, insufficient data exists at the present time for these pollutants to determine the need for WQBELs. Therefore, monitoring and reporting requirements have been retained in the permit renewal based on N.J.A.C. 7:14A-13.5(k)3 and the need to re-evaluate the necessity for WQBELs upon renewal of the permit. Monitoring shall be conducted on an **annual** basis using a **grab** sample type.

10. Whole Effluent Toxicity:

Section 101(a) of the Clean Water Act (CWA) establishes a national policy of restoring and maintaining the chemical, physical and biological integrity of the Nation's waters. In addition, section 101(a)(3) of the CWA and the State's SWQS at N.J.A.C. 7:9B-1.5(a)4 state that the discharge of toxic pollutants in toxic amounts is prohibited. Further, 40 CFR 122.44(d) and N.J.A.C. 7:14A-13.6(a) require that where the Department determines using site-specific WET data that a discharge causes, shows a reasonable potential to cause, or contributes to an excursion above the SWQS, the permitting authority must establish effluent limits for WET.

In order to determine the need for a new WET WQBEL, the Department reviews all available WET data. There is no existing Actue WET data for DSN 001A. As a result, WQBEL analyses have not been conducted. However, monitoring for Acute WET is proposed in this renewal permit based on N.J.A.C. 7:14A-13.5(k)3 and the need to re-evaluate the necessity for WQBELs upon renewal of the permit (based on the recommendations of section 3.1 of the EPA Technical Support Document). Monitoring shall be conducted on an **annual** basis using a **composite** sample type. The test species method to be used for acute testing shall be the *Mysidopsis bahia* 96 hour definitive test. Such selection is based on the saline characteristics of the receiving stream, the existing permit, N.J.A.C. 7:9B-1.5 and N.J.A.C. 7:18, the Regulations Governing the Certification of Laboratories and Environmental Measurements (N.J.A.C. 7:18).

DSN 003A: Stormwater Discharge (formerly included slag pond discharge until 2009)

1. Flow:

Monitoring for **Flow** is consistent with the existing permit and is required pursuant to N.J.A.C. 7:14A-13.13 and 13.14. Flow shall be monitored **once per month** as a monthly average and a daily maximum with a **calculated** sample type as described in Part IV.

2. Total Suspended Solids (TSS):

The existing permit included Net TSS limits of 30 mg/L as a monthly average and 100 mg/L as a daily maximum. Since intake water is no longer used in the closed slag ponds, these limits are retained but are being applied as Gross **TSS** effluent limits. The monitoring frequency is **twice per month** using a **grab** sample type.

3. pH:

The daily minimum and daily maximum **Effluent pH** limitations are consistent with the existing permit and are imposed pursuant to N.J.A.C. 7:14A-13.19. The monitoring frequency of twice per week is being reduced to **twice per month** in consideration of the fact that DSN 003A is stormwater only. Samples shall be taken using a **grab** sample type.

The requirement to monitor **Intake pH** has been removed in this permit action. Up until 2009, this outfall included discharge from the two slag ponds which contained intake water. Since the slag ponds were closed in 2009 and this discharge consists only of stormwater, monitoring for Intake pH and all other intake parameters is no longer appropriate.

4. Total Organic Carbon (TOC):

Monitoring for TOC is imposed as a monthly average and daily maximum in Part III on the DMR. Monitoring for TOC is consistent with other NJPDES permits that authorize the discharge of stormwater. The monitoring frequency of **once per month** is imposed with a **grab** sample type.

5. Petroleum Hydrocarbons:

The existing permit contained Net limitations of 10 mg/L and 15 mg/L as monthly average and daily maximum effluent limits of for Petroleum Hydrocarbons. These limitations have been retained pursuant to N.J.A.C. 7:14A-12.8(c), but due to the slag pond closure the limitations are now applied as Gross effluent limitations. Effluent limitations for petroleum hydrocarbons are consistent with other NJPDES permits that authorize the discharge of stormwater. The monitoring frequency is **twice per month** using a **grab** sample type. Monitoring for Intake Petroleum Hydrocarbons is no longer required.

6. Whole Effluent Toxicity:

Section 101(a) of the CWA establishes a national policy of restoring and maintaining the chemical, physical and biological integrity of the Nation's waters. In addition, section 101(a)(3) of the CWA and the State's SWQS at N.J.A.C. 7:9B-1.5(a)4 state that the discharge of toxic pollutants in toxic amounts is prohibited. Further, 40 CFR 122.44(d) and N.J.A.C. 7:14A-13.6(a) require that where the Department determines using site-specific WET data that a discharge causes, shows a reasonable potential to cause, or contributes to an excursion above the SWQS, the permitting authority must establish effluent limits for WET. The existing permit includes an Acute WET limit of LC50≥50%. In order to satisfy the requirements of the CWA, the State's SWQS and the NJPDES Regulations, the need for a WQBEL for WET was evaluated for this discharge.

In order to determine the need for a new WET WQBEL, the Department has analyzed all available WET effluent data. In general, an acceptable data set consists of, at a minimum, 10 data values including the most recent 2½ years of data collection. Between August 2005 and November 2011, the permittee conducted six Acute WET tests at DSN 003A using *Mysidopsis bahia*. All six test results showed an LC50 > 100%. Based on the review of this data set, the Department has concluded the following:

- WET was not found in quantifiable amounts in the effluent. As a result, WQBEL analyses have not been conducted.

WET monitoring was appropriate for outfall DSN 003A when the discharge contained slag pond overflow, however, since that portion of the discharge ceased in 2009, WET monitoring is not required in this permit action. WET monitoring is not typically applied to stormwater only discharges.

7. Toxics:

The existing permit contained effluent limits for Arsenic, Nickel and Zinc. These limitations are retained, however, they are applied as Gross effluent limitations rather than Net effluent limitations as explained above. Net limitations are not appropriate for a stormwater only discharge. Arsenic monitoring shall continue on a **quarterly** frequency using a **grab** sample type, while monitoring for Nickel and Zinc will remain **6 times per year** using a **grab** sample type. Retention of these monitoring conditions will ensure that this stormwater only discharge is properly characterized now that the slag ponds are closed.

In addition to the limited metals, four data points were available for Selenium. Three of the four data points were below the detection level of the test, with the one detected value at 10 µg/L. A WQBEL analysis was not conducted because Selenium was not consistently detected in the effluent and the level of the detected value was much lower than the SWQS of 71 µg/L.

In order to collect sufficient data to determine the need for WQBELs, the Department has included monitoring and reporting requirements as authorized by N.J.A.C. 7:14A-13.5(l). An **annual** priority pollutant scan for Metals (except for Arsenic, Nickel and Zinc) shall be completed and submitted on the WCR forms. The sample type for these analyses shall be a **grab** sample.

DSN 009A and 010A: Once-through Cooling Water (Steam Unit 1 and Steam Unit 2)

With the exception of the Toxics section, the following conditions apply to both outfalls, with each outfall having its own respective monitoring location. Monitoring for the toxics is only applicable for DSN 010A since this will be the active outfall after repowering.

1. Flow:

Monitoring for **Intake Flow** is required in this permit to assess the withdrawal rates. Monitoring for intake flow shall be monitored on a **continuous** basis and reported as a monthly average and daily maximum using a **calculated** sample type.

Monitoring for **Effluent Flow** is consistent with the existing permit and is required pursuant to N.J.A.C. 7:14A-13.13 and 13.14. Flow shall be measured on a **continuous** basis and reported as a monthly average and a daily maximum with a **calculated** sample type as described in Part IV.

2. pH:

The daily minimum and daily maximum **Effluent pH** limitations are consistent with the existing permit and are imposed pursuant to N.J.A.C. 7:14A-13.19. The monitoring frequency of **three times per week** is retained in this renewal permit with a **grab** sample type.

A monitoring condition has been retained from the existing permit for **Intake pH** . This monitoring condition is being included to demonstrate compliance with the condition specified in Part IV of this renewal permit. Specifically, this condition specifies that if the inlet pH exceeds 9.0 S.U., the discharge cannot exceed the inlet pH. If the inlet pH is less than 6.0 S.U., the discharge cannot be less than the inlet pH. Intake pH shall be monitored and reported **three times per week** with a **grab** sample type.

3. Heat and Temperature:

A **daily maximum effluent limit for temperature** of 38.3 degrees Celsius has been retained from the existing permit pursuant to N.J.A.C. 7:14A-13.19 on a year round basis for DSN 009A. Regarding DSN 010A, a daily maximum effluent limit for temperature of 38.3 degrees Celsius has been retained from the existing permit pursuant to N.J.A.C. 7:14A-13.19 from September through May whereas a daily maximum effluent limit of 40.5 degrees Celsius is being imposed for the months of June through August. The Department has determined that the repowering project qualifies as a material and substantial alteration or addition to the

permitted facility pursuant to Section 402(o) of the Federal Clean Water Act. Please refer to the Section 316(a) determination regarding the basis and background for these limitations.

Monthly average reporting for effluent temperature is also required for both outfalls consistent with the existing permit. Intake monitoring has also been retained where temperature shall be monitored on a **continuous** basis and reported as a monthly average and a daily maximum using a **metered** sample type.

Temperature difference limitations are also being imposed. Specifically, an **effluent net temperature difference limit** of 8.8 degrees Celsius as a daily maximum applies during the **summer** months of June through August and an **effluent net temperature difference limit** of 19.3 degrees Celsius as a daily maximum applies during the **winter** months of September through May for DSN 009A. These limits are retained from the existing permit. Also, an **effluent net temperature difference limit** of 11.0 degrees Celsius as a daily maximum shall apply during the **summer** months of June through August and an **effluent net temperature difference limit** of 19.3 degrees Celsius as a daily maximum applies during the **winter** months of September through May for DSN 010A.

Monthly average monitoring and reporting is also required for temperature difference on a year round basis for DSN 009A and DSN 010A. Monitoring and reporting for temperature difference is required on a **once per day** basis using a **calculated** sample type.

Heat limits are retained from the existing permit pursuant to N.J.A.C. 7:14A-13.19. While the effluent temperature and temperature difference limitations are being increased for DSN 010A during the summer months, the overall heat contribution from this facility is not being increased as evidenced by retention of the existing heat limits. Specifically, a heat limit of 1530 MBTU/Hour is retained as a daily maximum for the facility which applies to the sum of both outfalls. Heat limits shall be calculated on a **once per day** basis with a **calculated** sample type, and reported in monthly monitoring report forms.

4. Petroleum Hydrocarbons:

The monthly average and daily maximum effluent limits of 10 mg/L and 15 mg/L have been retained from the existing permit pursuant to N.J.A.C. 7:14A-13.19 as a narrative requirement. This determination was based on historical data showing that total petroleum hydrocarbons is not typically present in non-contact cooling water.

5. Chlorine Produced Oxidants (CPO):

The daily maximum limitation of 0.2 mg/L is based on 40 CFR 423.13(b)(1), N.J.A.C. 7:9B-1.6(c), and is retained from the existing permit consistent with the provisions of N.J.A.C. 7:14A-13.19. Monthly average monitoring and reporting is also required.

A narrative condition has been included in Part IV to ensure that bromination only occurs for two hours per day consistent with 40 CFR Part 423. Monitoring for **CPO** shall be conducted **three times per week** with a **grab** sample type.

6. Toxics:

The discharges from DSNs 009A and 010A are similar, both consisting of once through cooling water for steam electric units. As a result, monitoring for the toxic parameters was performed only at DSN 010A and considered to be representative of both outfalls, as authorized by N.J.A.C. 7:14A-4.4(b)(1).

In accordance with N.J.A.C. 7:14A-13.6(a), a WQBEL shall be imposed when the Department determines pursuant to N.J.A.C. 7:14A-13.5 that the discharge of a pollutant causes an excursion above a SWQS.

In order to determine the need for toxic pollutant specific WQBELs, the Department has analyzed all effluent data sets made available to the Department. Acceptable data sets generally consist of, at a minimum, 10 data values including the most recent 2½ years of data collection. A pollutant is considered discharged in

"quantifiable amounts" when an exact amount of that pollutant is measured equal to or above the detection level reported by a laboratory analysis (refer to the "Monitoring Report Form Reference (MRF) Manual", which can be found at http://www.nj.gov/dep/dwq/pdf/MRF_Manual.pdf, for further information). The Department has reviewed the most recent data set.

- At this time, insufficient data exist to determine the need for WQBELs. Specifically, four data values were collected in 2008 for Selenium and the other metals below were detected in the one sample taken for the 2009 permit application. The following table summarizes the detected pollutants for DSN 010A:

Parameter	**Number of detects**	**Number of nondetects**	**Highest detected value (**µg/L)	**NJ SWQS (**µg/L)
Arsenic	1	0	4.3	0.061
Bis (2-Ethylhexyl) Phthalate	1	0	6.4	2.2
Boron	1	0	3800	N/A
Iron	1	0	169	N/A
Magnesium	1	0	1,040,000	N/A
Manganese	1	0	30.1	100
Selenium	1	3	5	71
Zinc	1	0	20.8	81

In order to collect sufficient data to determine the need for WQBELs, the Department has included monitoring and reporting requirements as authorized by N.J.A.C. 7:14A-13.5(l). As a result of the data values in the table above, Arsenic and Boron monitoring is increased to a **semiannual** frequency with a **grab** sample type on the DMR form for DSN 010A. Increased Boron monitoring is consistent with other NJPDES permits for power plants. Monitoring is not increased for Bis(2-Ethylhexyl) Phthalate as this is a common lab contaminant, nor is it increased for Iron, which is not expected to be added by the processes at the Station. Monitoring is not increased for Managanese, Selenium, and Zinc because the detected values do not approach the SWQS. An **annual** priority pollutant scan for DSN 010A including Acids, Base/Neutrals, Metals, Pesticides, and Volatiles shall be completed and submitted on the WCR forms. The sample type for these analyses shall be a **grab** sample.

DSN 013A: Wastewater Treatment Plant Effluent (Industrial and Treated Sanitary Wastewater)

1. Flow:

Monitoring for **Flow** is consistent with the existing permit and is required pursuant to N.J.A.C. 7:14A-13.13 and 13.14. Flow shall be measured on a **continuous** basis and reported as a monthly average and a daily maximum with a **metered** sample type.

2. pH:

The daily minimum and daily maximum **pH** limitations are consistent with the existing permit and are imposed pursuant to N.J.A.C. 7:14A-13.19. The monitoring frequency of **continuous** is retained in this renewal permit with a **metered** sample type.

3. Total Suspended Solids (TSS):

The **TSS** limits of 30 mg/L as a monthly average and 100 mg/L as a daily maximum are retained from the existing permit in accordance with N.J.A.C. 7:14A-13.19. The monitoring frequency of **twice per month** is retained in this renewal permit and samples shall be obtained with a **4 hour composite** sample type.

4. Petroleum Hydrocarbons:

The monthly average and daily maximum effluent limits of 10 mg/L and 15 mg/L for **petroleum hydrocarbons** have been retained from the existing permit pursuant to N.J.A.C. 7:14A-13.19. Petroleum hydrocarbons shall be monitored on a **twice per month** basis with a **grab** sample type.

5. Total Organic Carbon:

The monthly average limit of 21 mg/L for **total organic carbon** has been retained from the existing permit pursuant to N.J.A.C. 7:14A-13.19. Daily maximum monitoring and reporting is also required on a concentration and loading basis. Monthly average loading monitoring is also required. The monitoring frequency of **once per month** and the **grab** sample type are retained in this renewal permit.

6. Dissolved Oxygen (DO):

The effluent limitations for **DO** are based on the SWQS at N.J.A.C. 7:9B-1.14(c) and the impaired status of the GEHB. This segment of the receiving stream is listed on Sublist 5 of the 305(b) Report and 303(d) List of impaired waterbodies as not meeting criteria for Dissolved Oxygen. A 24-hour average limitation of 5.0 mg/L and an instantaneous minimum limitation of 4.0 mg/L adequately protect the instream water quality for DO. The monitoring frequency is **once per month** with a **grab** sample type.

7. Whole Effluent Toxicity (WET):

Section 101(a) of the CWA establishes a national policy of restoring and maintaining the chemical, physical and biological integrity of the Nation's waters. In addition, section 101(a)(3) of the CWA and the State's SWQS at N.J.A.C. 7:9B-1.5(a)4 state that the discharge of toxic pollutants in toxic amounts is prohibited. Further, 40 CFR 122.44(d) and N.J.A.C. 7:14A-13.6(a) require that where the Department determines using site-specific WET data that a discharge causes, shows a reasonable potential to cause, or contributes to an excursion above the SWQS, the permitting authority must establish effluent limits for WET. The existing permit includes an Acute WET limit of LC50≥50%. In order to satisfy the requirements of the CWA, the State's SWQS and the NJPDES Regulations, the need for a new WQBEL for WET was evaluated for this discharge.

In order to determine the need for a new WET WQBEL, the Department has analyzed all available WET effluent data. In general, an acceptable data set consists of, at a minimum, 10 data values including the most recent 2½ years of data collection. Between August 2005 and November 2011, the permittee conducted eight Acute WET tests at DSN 013A using *Mysidopsis bahia*. All eight test results showed an LC50 > 100%. Based on the review of this data set, the Department has concluded the following:

- WET was not found in quantifiable amounts in the effluent. As a result, WQBEL analyses have not been conducted.

On January 5, 2009 the NJPDES Rules were readopted. This readoption repealed N.J.A.C. 7:14A-5.3(a) which contained the state minimum effluent standard for acute WET and instead adopted an acute WET action level of LC50≥50% at N.J.A.C. 7:14A-13.18(f). Therefore, consistent with this requirement, the existing and effective acute WET limitation of LC50≥50% is being replaced with an acute WET action level of LC50≥50% in this renewal. Monitoring and reporting will be required to determine whether the discharge causes, shows a reasonable potential to cause, or contributes to an excursion above the SWQS.

Imposing an action level for acute WET will be equally protective of water quality as an effluent limit in this circumstance, since the violation of either the WET limitation or the action level carries with it the same enforceable permit condition to initiate the Toxicity Reduction and Implementation Requirements (TRIR), in order to correct the toxicity problem should this value be exceeded. The Department anticipates there will be no change in water quality as a result of this change. This change satisfies the antibacksliding provisions at N.J.A.C. 7:14A-13.19, which incorporate Section 402(o)3 of the Federal Clean Water Act, because it includes

the TRIR provisions. Specifically, Section 402(o)3 prohibits the revision of an effluent limit "if the implementation of such limitation would result in a violation of a water quality standard." In this circumstance, violation of either the numerically identical action level or an effluent limitation will trigger an enforceable permit condition to conduct a TRIR in order to address or prevent a violation of a water quality standard.

The test species method to be used for acute testing shall be the *Mysidopsis bahia* 96 hour definitive test. Such selection is based on the saline characteristics of the receiving stream, the existing permit, N.J.A.C. 7:9B-1.5 and N.J.A.C. 7:18, the Regulations Governing the Certification of Laboratories and Environmental Measurements (N.J.A.C. 7:18).

As authorized by N.J.A.C. 7:14A-6.2(a)14, the monitoring frequency for acute WET is established at **annual** with a **composite** sample type.

7. Toxics:

In accordance with N.J.A.C. 7:14A-13.6(a), a WQBEL shall be imposed when the Department determines pursuant to N.J.A.C. 7:14A-13.5 that the discharge of a pollutant causes an excursion above a SWQS.

In order to determine the need for toxic pollutant specific WQBELs, the Department has analyzed all effluent data sets made available to the Department. Acceptable data sets generally consist of, at a minimum, 10 data values including the most recent 2½ years of data collection. A pollutant is considered discharged in "quantifiable amounts" when an exact amount of that pollutant is measured equal to or above the detection level reported by a laboratory analysis (refer to the "Monitoring Report Form Reference (MRF) Manual", which can be found at http://www.nj.gov/dep/dwq/pdf/MRF_Manual.pdf, for further information). Based on the review of the data sets, the Department has concluded the following:

- The existing permit contains effluent limitations for four toxic pollutants in the total recoverable form, namely Copper, Total Chromium, Nickel, and Zinc as well as Total Iron. The data for these metals is summarized in the Permit Summary Table for DSN 013A near the end of this fact sheet. All data values for Total Chromium, Iron, Nickel and Zinc are below the respective SWQS for these parameters. The existing limitations are carried forward from the existing permit for Total Chromium, Iron, Nickel and Zinc in accordance with N.J.A.C. 7:14A-13.19. Monitoring for these limited metals will continue on a **quarterly** basis with a **4-hour composite** sample type to be reported on the DMR. Consistent with the intent of 40 CFR 122.45(c) and N.J.A.C. 7:14A-13.14(b), monitoring data for toxic metals (excluding Hexavalent Chromium) shall be expressed as total recoverable. As authorized by N.J.A.C. 7:14A-13.14(b)3, the monitoring data for Hexavalent Chromium shall be expressed as dissolved.

- At this time, insufficient data is available for most priority pollutant parameters to determine the need for WQBELs. Specifically, four data values were collected in 2008 for Arsenic and Selenium on the WCR and the other data listed below was collected in a priority pollutant scan that the permittee submitted with the 2009 permit application. The following table summarizes the detected pollutants for DSN 013A:

Parameter	**Number of detects**	**Number of nondetects**	**Highest detected value (**µg/L)	**NJ SWQS (**µg/L)
Arsenic	4	1	169	0.061
Bis (2-Ethylhexyl) Phthalate	1	0	13.0	2.2
Chromium, Total	1	0	0.01	750
Nickel	1	0	0.04	22
Toluene	1	0	0.27	15,000
Zinc	1	0	0.676	81
Selenium	4	0	40	71

In order to collect sufficient data to determine the need for WQBELs, the Department has included monitoring and reporting requirements as authorized by N.J.A.C. 7:14A-13.5(l). As a result of the data values in the table above, Arsenic and Selenium monitoring is increased to a **semiannual** frequency with a **grab** sample type on the DMR form. Monitoring is not increased for Bis (2-Ethylhexyl) Phthalate as this is a common lab contaminant. An **annual** priority pollutant scan including Acids, Base/Neutrals, Metals (except for the five metals listed above), Pesticides, and Volatiles shall be completed and submitted on the WCR form. The sample type for these analyses shall be a **grab** sample.

- A review of the data shows that Copper is the only limited metal with data values that are higher than the SWQS of 4.8 as acute instream water quality criteria, and 3.1 as chronic instream water quality criteria. Since Copper was found to be discharged in quantifiable amounts in the effluent, further WQBEL analyses have been conducted.

Quantified Pollutant Analysis Methodology:

For each pollutant discharged in quantifiable amounts in the effluent, a cause analysis was conducted using the procedures specified in the USEPA Technical Support Document in accordance with N.J.A.C. 7:14A-13.5. The cause analysis consists of a comparison between the pollutant's maximum effluent concentration value (or average value of a long term data set in the case of criteria with an averaging period longer than one year) and the pollutant's applicable site specific wasteload allocation.

Using the steady state mass balance equation, wasteload allocations were developed utilizing the applicable surface water quality criteria, pollutant specific upstream concentrations (when available), and dilution factors from the water quality study dated February 1993, titled Volume 4 from the "Application for NJPDES Permit for the FGD Wastewater Treatment System Surface Water Discharge," prepared by CH2M Hill. This study resulted in an acute dilution factor of 4 and a chronic dilution factor of 10.

For Copper, the applied criterion is based on a water effect ratio (WER) of 1.0. Default translators were utilized to convert total recoverable data to its dissolved equivalent for the cause analyses for aquatic criteria, and, if applicable, to convert the dissolved long term averages to total recoverable values for determining WQBELs. Translator values for Coppper are listed below, and are based on the conversion factors for dissolved metals at 40 CFR Part 131 and N.J.A.C. 7:9B-1.5(c)6. The default metal translators used in the analyses are as follows:

Metal	Saline Water	
	Translator (acute)	Translator (chronic)
Copper	0.830	0.830

Quantified Pollutant Analysis Results:

Cause analyses were conducted on Copper. As a result of the cause analyses, Copper was not found to cause an excursion of the SWQS. Refer to Table A at the back of the Fact Sheet for a summary of the effluent limitation analysis for the Toxic Metals, Organic Compounds, and/or Cyanide. The Department's conclusions and results are as follows:

- Since the discharge of Copper in the permittee's effluent was not found to cause an excursion of the SWQS, a newly calculated WQBEL is not proposed in the draft permit at this time. However, consistent with the antibacksliding provisions at N.J.A.C. 7:14A-13.9(a) and the antidegradation requirements at N.J.A.C. 7:9B-1.5(d), the existing daily maximum concentration effluent limitation of 8.7 mg/L has been retained in this permit action. The effluent limitation is based on a WQBEL

analysis conducted for the existing permit. Monitoring shall continue on a **quarterly** basis using a **4-hour composite** sample type.

DSN 014: Discharge from the Flue Gas Desulfurization (FGD) System – internal monitoring point

1. Flow:

   Monitoring for **Flow** is consistent with the existing permit and is required pursuant to N.J.A.C. 7:14A-13.13 and 13.14. Flow shall be measured on a **continuous** basis and reported as a monthly average and a daily maximum with a **metered** sample type.

2. pH:

   The daily minimum and daily maximum **pH** limitations are consistent with the existing permit and are imposed pursuant to N.J.A.C. 7:14A-13.19. The monitoring frequency of **once per day** is retained in this renewal permit along with a **grab** sample type.

3. 5-day Biochemical Oxygen Demand:

   Based on discharge monitoring report data which shows low levels of BOD_5, the Department has continued a monitor only requirement for **BOD_5** as a monthly average and daily maximum on both a concentration basis and a mass loading basis. Monitoring shall be conducted on a **twice per month** basis with a **4 hour composite** sample type.

4. Total Suspended Solids (TSS):

   The **TSS** limits of 30 mg/L as a monthly average and 100 mg/L as a daily maximum are retained from the existing permit in accordance with N.J.A.C. 7:14A-13.19. Loading limitations of 8.18 kg/day as a monthly average and 27.25 kg/day as a daily maximum have also been retained from the existing permit. The monitoring frequency for TSS is **twice per month** with a **4 hour composite** sample type.

5. Temperature:

   Effluent monitoring for **Temperature** is retained from the existing permit pursuant to N.J.A.C. 7:14A-13.19. Temperature shall be monitored on a **once per day** basis using a **grab** sample type and reported as a monthly average and a daily maximum. Temperature limits are not imposed at DSN 014 since this is an internal monitoring point and temperature limits are imposed at DSN 010, which is the outfall that this internal monitoring point is routed to.

6. Petroleum Hydrocarbons:

   The monthly average and daily maximum effluent limits of 10 mg/L and 15 mg/L for P**etroleum Hydrocarbons** have been retained from the existing permit pursuant to N.J.A.C. 7:14A-13.19. Petroleum hydrocarbons shall be monitored on a **twice per month** basis with a **grab** sample type.

7. Total Organic Carbon:

   Monitoring for **Total Organic Carbon** as a monthly average and a daily maximum has been retained from the existing permit pursuant to N.J.A.C. 7:14A-13.19. Monthly average and daily maximum mass loading reporting is also required. The monitoring frequency of **twice per month** as well as a **4 hour composite** sample type are retained in this renewal permit.

8. Total Sulfide:

The **Total Sulfide** limits of 3900 ug/L as a monthly average and 7900 ug/L as a daily maximum are retained from the existing permit in accordance with N.J.A.C. 7:14A-13.19. Loading limitations of 1.1 kg/day as a monthly average and 2.1 kg/day as a daily maximum have also been retained from the existing permit. These limits are WQBELs and were originally calculated using dilution factors obtained from Volume 4 from the "Application for NJPDES Permit for the FGD Wastewater Treatment System Surface Water Discharge," dated February 1993 prepared by CH2M Hill. The monitoring frequency for total sulfide is **once per week** with a **4 hour composite** sample type.

9. Whole Effluent Toxicity:

In order to determine the need for a WET WQBEL, the Department has analyzed all available WET effluent data. In general, an acceptable data set consists of, at a minimum, 10 data values including the most recent 2½ years of data collection. Between August 2005 and November 2010, the permittee conducted nine Acute WET tests at DSN 014A using *Mysidopsis bahia*. All nine test results showed an LC50 > 100%. Based on the review of the applicable data set, the Department has concluded the following:

- WET was not found in quantifiable amounts in the effluent. As a result, WQBEL analyses have not been conducted.

As explained in the basis for WET at DSN 013A above, the existing and effective acute WET limitation of LC50≥50% is being replaced with an acute WET action level of LC50≥50% in this renewal. Monitoring and reporting will be required to determine whether the discharge causes, shows a reasonable potential to cause, or contributes to an excursion above the SWQS.

The test species method to be used for acute testing shall be the *Mysidopsis bahia* 96 hour definitive test. Such selection is based on the saline characteristics of the receiving stream, the existing permit, N.J.A.C. 7:9B-1.5 and N.J.A.C. 7:18, the Regulations Governing the Certification of Laboratories and Environmental Measurements (N.J.A.C. 7:18).

As authorized by N.J.A.C. 7:14A-6.2(a)14, the monitoring frequency for **acute WET** is established at **annual** using a **composite** sample type.

10. Toxics:

In accordance with N.J.A.C. 7:14A-13.6(a), a WQBEL shall be imposed when the Department determines pursuant to N.J.A.C. 7:14A-13.5 that the discharge of a pollutant causes an excursion above a SWQS.

In order to determine the need for toxic pollutant specific WQBELs, the Department has analyzed all effluent data sets made available to the Department. Acceptable data sets generally consist of, at a minimum, 10 data values including the most recent 2½ years of data collection. A pollutant is considered discharged in "quantifiable amounts" when an exact amount of that pollutant is measured equal to or above the detection level reported by a laboratory analysis (refer to the "NJPDES Monitoring Report Form Reference Manual," updated December 2007 for further information). Based on the review of the data sets, the Department has concluded the following:

- At this time, insufficient data exist for most of these parameters to determine the need for WQBELs. Specifically, four data values were collected in 2008 for Selenium and Zinc. In addition to the WCR data submitted during the last permit cycle, the permittee provided priority pollutant data with the 2009 permit application. The following table summarizes the detected pollutants for DSN 014A:

Parameter	Number of detects	Number of nondetects	Highest detected value (µg/L)	NJ SWQS (µg/L)
Bis (2-Ethylhexyl) Phthalate	1	0	5.3	2.2
Boron	1	0	3790	N/A
Iron	1	0	214	N/A
Selenium	2	2	50	71
Sulfate	1	0	2100	N/A
Zinc	1	3	100	81

In order to collect sufficient data to determine the need for WQBELs, the Department has included monitoring and reporting requirements as authorized by N.J.A.C. 7:14A-13.5(l). Monitoring for these six parameters has been increased to **semi-annual** with either a **grab** or **4-hour composite** sample type.

The existing permit contains effluent limitations for four toxic pollutants, including Total Recoverable (TR) Arsenic, TR Copper, TR Mercury and Sulfide. These limitations were originally water quality based. The data for these parameters is summarized in the Permit Summary Table for DSN 014A near the end of this fact sheet. The existing limitations for Arsenic, Copper, Mercury and Sulfide are carried forward from the existing permit pursuant to N.J.A.C. 7:14A-13.19 with a **weekly** monitoring frequency using a **4 hour composite** sample type on the DMR form.

Because this outfall will cease discharge upon completion of the repowering project, no additional monitoring is specified for this outfall.

DSN 015: Consequential Sequencing Batch Reactor – internal monitoring point

1. Flow:

   This permit action does not include a numerical limitation for flow. Monitoring conditions are applied pursuant to N.J.A.C. 7:14A-13.13. Flow shall be measured on a **continuous** basis and reported as a monthly average and a daily maximum with a **metered** sample type.

2. pH:

   The daily minimum and daily maximum effluent limitations are based on the definition of secondary treatment at 40 CFR 133.102(c) and N.J.A.C. 7:14A-12.2 (f). The monitoring frequency is **once per month** using a **grab** sample type in accordance with N.J.A.C. 7:14A-14.2.

3. Fecal Coliform:

   The limitations of 200 colonies per 100 mL as a monthly average and 400 colonies per 100 mL as a weekly average are based on N.J.A.C. 7:14A-12.5(b) 1. and 2. The monitoring frequency is **once per month** with a **grab** sample type in accordance with N.J.A.C. 7:14A-14.2.

4. Enterococci:

   The Department continues to impose Fecal Coliform as the bacterial standard for effluent control. Since Enterococci criteria were adopted for SE1 and SC waters in the October 2006 Surface Water Quality Standards, N.J.A.C. 7:9B-1.14(d)1(ii)1, an Enterococci monitoring requirement is included in this permit. The monitoring frequency is **once per month** with a **grab** sample type in accordance with N.J.A.C. 7:14A-14.2.

5. Ammonia (Total as N):

   In accordance with N.J.A.C. 7:14A-13.6(a), a WQBEL shall be imposed when the Department has determined that the discharge of a pollutant causes an excursion above a SWQS. The SWQS for ammonia in saline waters is identified at N.J.A.C. 7:9B-1.14. At this time, insufficient facility specific effluent data exists to determine the need to impose WQBELs for ammonia. Therefore, as authorized by N.J.A.C. 7:14A-6.2(a)14 and N.J.A.C. 7:14A-13.5(l), the Department has included monthly average and daily maximum monitoring and reporting requirements for this pollutant in the permit. Continued ammonia monitoring is necessary in order to assess ammonia contributions from this internal wastestream. The monitoring frequency is **once per month** with a **grab** sample type.

6. Toxics and WET: DSN 015 is an internal monitoring point. The treated effluent from this outfall enters the wastewater treatment plant where it is treated further, before being discharged via DSN 013. Because this is an internal monitoring point and the effluent receives further treatment before being discharged, toxics and WET are not applied to this discharge.

C. Recommended Quantitation Levels Policy (RQLs):

The Department developed the RQLs to insure that useful data is provided to the Department in order to characterize the discharger's effluent. The Department recommends that the permittee achieve detection levels that are at least as sensitive as the RQLs found in Part III. The Department has determined that the quantitation levels listed therein can be reliably and consistently achieved by most state certified laboratories for most of the listed pollutants using the appropriate procedures specified in 40 CFR Part 136. FAILURE TO ATTAIN A QUANTITATION LEVEL AS SENSITIVE AS A LISTED RQL IS NOT A VIOLATION OF THE PERMIT, BUT DOES TRIGGER SOME ADDITIONAL REPORTING REQUIREMENTS FOR THE PERMITTEE AS SPECIFIED IN PART IV OF THE PERMIT.

D. Reporting Requirements:

All data requested to be submitted by this permit shall be reported on the Discharge Monitoring Reports (DMRs), Waste Characterization Reports (WCR), and Residual Transfer Reports (RTR) as appropriate and submitted to the Department as required by N.J.A.C. 7:14A-6.8(a).

E. General conditions:

In accordance with N.J.A.C. 7:14A-2.3 and 6.1(b), specific rules from the New Jersey Administrative Code have been incorporated either expressly or by reference in Part I and Part II.

F. Operator Classification Number:

The operator classification requirement is no longer included in the permit. To obtain or determine the appropriate licensed operator classification for the treatment works specified, the permittee shall contact the Bureau of Construction and Connection Permits at (609) 984-4429.

G. Flow Related Conditions:

The wastewater discharges from BLE are addressed in the currently valid Cape May County Wastewater Management Plan that was adopted in 2001 and revised in 2007. The facility is noted in the 2001 plan as having a surface water discharge into the Great Egg Harbor/ Tuckahoe River estuary system consisting of industrial processing wastewater, largely non-contact cooling waters.

The net effect of the repowering project will be a substantial reduction in the volume of processed wastewater discharging into the Great Egg Harbor/ Tuckahoe River estuary system.

Although the repowering project is not specifically addressed in the Plan, due to the nature of the repowering project and the projected impact on the region's surface water quality, the Department has determined that it is Consistent with the Plan.

H. Residuals/Sludge Conditions:

Analysis of the industrial sludge for the parameters total solids, arsenic, selenium, copper, zinc, nickel, mercury, chromium, and iron found on Table III-J-1 of Part III is required because they were detected in previous sludge quality monitoring data submitted to the Department under NJPDES Permit No. NJ0005444 and the Sludge Quality Assurance Regulations (N.J.A.C. 7:14C). The parameters nitrate nitrogen, total kjeldahl nitrogen, ammonia nitrogen, potassium, calcium, molybdenum, phosphorus, beryllium, cadmium, and lead were added to Table III-J-1 because they can reasonably be expected to be present based on various on-site environmental monitoring submitted as part of the application. The frequency of monitoring is dependent on the amount of sludge produced. Since the amount of sludge generated is less than 290 dry metric tons per year the frequency of monitoring is annually.

The annual Residual Transfer Report required for reporting the quantity of sludge removed from the domestic treatment works remains in NJPDES Permit No. NJ0077771 pending development of a new SQAR General Permit for domestic treatment works with a permitted flow less than or equal to 20,000 gallons per day.

All treatment works with a discharge regulated under N.J.A.C. 7:14A must have permits that implement applicable technical standards for residuals management. Generally, the permit issued to the treatment works generating the residual will include applicable residual quality monitoring as well as other general conditions required by N.J.A.C. 7:14A-6. In addition, the permit may include conditions related to any aspect of residual management developed on a case-by-case basis where the Department determines that such conditions are necessary to protect public health and the environment.

The permit may also include conditions establishing requirements for treatment works that send residual to other facilities for final use or disposal. Thus, **ALL** residual preparers (that is, generators as well as persons who manage the residual) are required to submit basic information concerning their residual use and disposal practices. This basic information is submitted by compliance with the Sludge Quality Assurance Regulations (N.J.A.C. 7:14C).

The documents listed below have been used to establish the residual conditions of the Draft Permit:

a. United States Environmental Protection Agency "Standards for the use or disposal of sewage sludge" (40 CFR Part 503),
b. "New Jersey Pollutant Discharge Elimination System" (N.J.A.C. 7:14A),
c. Technical Manual for Residuals Management, May 1998,
d. USEPA Part 503 Implementation Guidance, EPA 833-R-95-001, October 1995. This document is a compilation of federal requirements, management practices and EPA recommended permit conditions for sewage sludge use and management practices,
e. USEPA A Plain English Guide to the EPA Part 503 Biosolids Rule, EPA/832/R-93/003, September 1994,
f. New Jersey "Statewide Sludge Management Plan", January 2006 and
g. New Jersey "Sludge Quality Assurance Regulations" (SQAR), N.J.A.C. 7:14C.

I. Biocides or Other Cooling Water Additives:

The Department has approved the permittee's request to use the following corrosion inhibitors, biocides, or other cooling water additives in its non-contact cooling water: Biocide (Spectrus OX1200). In the boiler water, the permittee has been approved to use Disodium Phosphate, and Trisodium Phosphate. Additionally, cooling tower water is treated with bromine. The wastewater is treated with Hydrated Lime, 93% Sulfuric Acid, and a polymer (CLEARTREAT 2300G). If the permittee decides to begin using any additional additives in the future, the

permittee must notify the Bureau of Surface Water Permitting at least 180 days prior to use so that the permit may be reopened to incorporate any additional limitations deemed necessary.

11 Summary of Stormwater Conditions for DSNs 003A, 006A and 007A:

A. Stormwater Requirements for DSNs 003A, 006A and 007A

DSN003A consists of stormwater from the former slag pond area whereas DSNs 006A and 007A consist of stormwater from yard drains that drain non-process areas of the facility. Based on site inspections, the drainage areas for these outfalls appear to be well maintained and no process operations are conducted within the drainage areas. The permittee has a long term compliance history and good housekeeping practices at this facility. No significant industrial activities occur at these areas and stormwater is not exposed to source material so there is minimum potential for stormwater contamination.

All aboveground storage tanks have been constructed to API specifications and also have secondary containment, as per BLE's DPCC/DCR Plan. All dry chemical storage is within enclosed buildings, thereby reducing the potential for inadvertent discharge of these materials into stormwater.

The existing permit required BMPs. This renewal permit requires compliance with Stormwater Pollution Prevention Plan (SPPP) requirements.

BMPs and development of an SPPP are being imposed, as described later in Part IV. An SPPP requires a facility to take measures to eliminate/minimize exposure of precipitation to industrial source material. An SPPP can not only reduce the pollutants reaching the receiving water through point sources but also through non-point sources previously unregulated. Therefore, use of an SPPP in concert with monitoring requirements (i.e. no effluent limits) is appropriate.

Based on the above, the Department is requiring **annual** sampling to verify the effectiveness of the SPPP for DSN 006A. These sampling requirements are specified in Part III for DSN 006A. Since DSN 006A and 007A drain similar areas and are expected to show similar contamination (if any), the Department has required monitoring of only one of these outfalls, namely DSN 006A as this outfall is located in the vicinity of where Unit 4 will be located. This requirement is consistent with N.J.A.C. 7:14A-4.4(b)1. As described previously, sampling requirements are also imposed for DSN 003A.

B. Stormwater Pollution Prevention Plan (SPPP)

Pursuant to the Federal Stormwater Regulations, 40 CFR 122.26(b)(14), BLE falls under the definition of "stormwater discharge associated with industrial activity." The proposed BMPs (BMPs can be a component of any SPPP plan) and other conditions are authorized by the Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.). These Statutes are implemented by the NJPDES N.J.A.C. 7:14A-1 permit programs.

In accordance with the Federal Clean Water Act and its implementing regulations, specifically, 40 CFR 122.26 (a)(1)(ii), this facility is required to have a permit for its stormwater discharges to surface water, if material handling equipment or activities, raw materials, intermediate products, final products, waste materials, by-products, or industrial machinery are exposed to stormwater.

BMPs are being utilized to eliminate exposure of stormwater to industrial source material or to prevent discharge of contaminated stormwater. The facility will comply with all the BMPs outlined in Part IV of this permit.

The Department is authorized under the Federal Regulations, specifically 40 CFR 122.44(k), and under NJPDES rules in N.J.A.C. 7:14A-6.2(b)1, to impose BMPs to control or abate the discharge of pollutants in lieu of numeric effluent limitations in NJPDES permits when the Department finds numeric effluent limitations to be infeasible or when BMPs are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the State and Federal Acts. The SPPP being proposed in this permit will consist of requirements for preparing the SPPP,

certifying the preparation of the plan, implementing the SPPP by a compliance date, certifying the implementation of the SPPP, and annual re-certifying and reporting of the effectiveness of the SPPP. BMP's are a component of the SPPP. The objective of the SPPP is to control stormwater contamination through the elimination of exposure, during and after storm events, of industrial materials, machinery, waste products, or other source materials located at the facility.

The SPPP also includes conditions which are consistent with the Department's and EPA's stormwater permitting philosophy of reducing the amount of pollution created and to prevent pollution from occurring in the first place. The SPPP requirements operate as limitations and controls on stormwater effluent discharges to minimize stormwater contamination and are intended to achieve this through Best Conventional Pollutant Control Technology (BCT) and Best Available Technology Economically Achievable (BAT).

12 Variances to Permit Conditions:

A thermal variance is granted with respect to temperature, in accordance with Section 316(a) of the Clean Water Act.

Procedures for modifying a WQBEL are found in the New Jersey NJSWQS, N.J.A.C. 7:9B-1.8 and 1.9. If a WQBEL has been proposed in this permit action, the permittee may request a modification of that limitation in accordance with N.J.A.C. 7:14A-11.7(a). This request must be made prior to the close of the public comment period. The information that must be submitted to support the request may be obtained from the Bureau of Water Quality Standards and Assessment at (609) 777-1753.

13 Description of Procedures for Reaching a Final Decision on the Draft Action:

Please refer to the procedures described in the public notice that is part of the draft permit. The public notice for this permit action is published in the *Press of Atlantic City* and in the DEP Bulletin.

14 Contact Information

If you have any questions regarding this permit action, please contact Heather Genievich, Bureau of Surface Water Permitting at (609) 292-4860.

15 Calculation Equations:

A. Steady State Mass Balance Equation: $C_d = C_i = (Q_{up} \times C_{up} + Q_w \times WLA)/ (Q_{up} + Q_w)$

where,
- C_d = downstream concentration
- C_i = instream surface water criteria (from N.J.A.C. 7:9B)
- C_{up} = upstream concentration
- Q_{up} = upstream design low flow value, cfs
- Q_w = wastewater flow, cfs
- WLA = wasteload allocation

B. Wasteload Allocation: $WLA = C_i \times Df - C_{up}(Df - 1)$

where,
- WLA = wasteload allocation
- C_i = instream surface water criteria (from N.J.A.C. 7:9B)
- C_{up} = upstream concentration
- Df = dilution factor

C. Long Term Average: LTA = (WLA) × [WLA multiplier (LTA)]

where,	LTA	=	long term average
	WLA	=	wasteload allocation
	WLA multiplier (LTA)	=	wasteload allocation multiplier for long term average, the 99th percentile multiplier, (see Table 5-1 in TSD, page 102)

D. Maximum Daily Limitation: MDL = (LTA) × [LTA multiplier (MDL)]

where,	MDL	=	maximum daily limitation
	LTA	=	long term average
	LTA multiplier (MDL)	=	long term average multiplier for the maximum daily limitation , the 99th percentile multiplier, (see Table 5-2 in TSD, page 103)

E. Average Monthly Limitation: AML = (LTA) × [LTA multiplier (AML)]

where,	AML	=	average monthly limitation
	LTA	=	long term average
	LTA multiplier (AML)	=	long term average multiplier for the average monthly limitation, the 99th percentile multiplier, (see Table 5-2 in TSD, page 103)

16 Permit Summary Tables

Unless otherwise noted, all effluent limitations are expressed as maximums. Dashes (--) indicate there is no effluent data, no limitations, or no monitoring for this parameter depending on the column in which it appears.

DSN 001A (Cooling Tower Blowdown)

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA (3/2005-9/2012)	EXISTING LIMITS DSN 001A	FINAL LIMITS	MONITORING FREQUENCY	SAMPLE TYPE
Effluent Flow	MGD	Monthly Avg. Daily Max.	1.09 4.28	MR MR	MR MR	Continuous	Calculated
Intake Flow	MGD	Monthly Avg. Daily Max	2.03 5.75	MR MR	MR MR	Continuous	Calculated
Total Organic Carbon (TOC)	mg/L	Monthly Avg. Daily Max	-- --	MR MR	MR MR	1/Month	Grab
pH – Effluent	S.U.	Minimum Maximum	7.5 8.5	6.0 9.0	6.0 9.0	2/Week	Grab
pH - Intake	S.U.	Minimum Maximum	7.26 8.13	MR MR	MR MR	2/Week	Grab
Total Suspended Solids (TSS) - Intake	mg/L	Monthly Avg. Daily Max.	46.31 276	MR MR	MR MR	1/Month	Grab
Total Suspended Solids (TSS) – Effluent	mg/L	Monthly Avg. Daily Max.	49.31 155	MR MR	MR MR	1/Month	Grab
Total Suspended Solids (TSS) - Net	mg/L	Monthly Avg. Daily Max. # positive/# negative	-49.81 46 10/25	30 100	30 100	1/Month	Calculated
Temperature – Effluent October-May	°C	Monthly Avg. Daily Max.	18.25 34	MR MR	MR MR	Continuous	Metered
Temperature – Effluent June-September	°C	Monthly Avg. Daily Max.	28.42 37	MR MR	MR MR	Continuous	Metered
Temperature – Intake October-May	°C	Monthly Avg. Daily Max.	9.94 21	MR MR	MR MR	Continuous	Metered
Temperature – Intake June-September	°C	Monthly Avg. Daily Max.	23.58 36	MR MR	MR MR	Continuous	Metered
Heat - Net	MBTU/Hour	Monthly Avg. Daily Max. # positive/# negative	2.68 20.3 33/1	MR 50	MR 50	1/Day	Calculated
Chlorine Produced Oxidants	mg/L	Monthly Avg. Daily Max. # detect/# non-detect	0.06 0.13 25/9	0.76 1.0	0.2 0.5	3/Week	Grab
Total Zinc – Net	mg/L	Monthly Avg. Daily Max. # detect/# non-detect	0.064 0.064 1/0	MR* 1.0*	MR 1.0	1/Month	Grab
Total Zinc – Effluent	mg/L	Monthly Avg. Daily Max. # detect/# non-detect	0.08 0.08 1/0	MR* MR*	MR MR	1/Month	Grab
Total Zinc – Intake	mg/L	Monthly Avg. Daily Max. # detect/# non-detect	<0.016 <0.016 0/1	MR* MR*	MR MR	1/Month	Grab
Total Chromium – Net	mg/L	Monthly Avg. Daily Max. # detect/# non-detect	<0.010 <0.010 0/1	MR* 0.2*	MR* 0.2*	1/Month*	Grab
Total Chromium – Intake	mg/L	Monthly Avg. Daily Max. # detect/# non-detect	<0.003 - <0.010 <0.003 - <0.010 0/2	MR* MR*	MR* MR*	1/Month*	Grab
Total Chromium – Effluent	mg/L	Monthly Avg. Daily Max. # detect/# non-detect	<0.003 - <0.010 <0.003 - <0.010 0/2	MR* MR*	MR* MR*	1/Month*	Grab
Total Copper – Effluent	mg/L	Monthly Avg. Daily Max	-- --	-- --	MR MR	1/6 months	Grab

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA (3/2005-9/2012)	EXISTING LIMITS DSN 001A	FINAL LIMITS	MONITORING FREQUENCY	SAMPLE TYPE
Total Nickel - Effluent	mg/L	Monthly Avg. Daily Max	-- --	-- --	MR MR	1/6 months	Grab
Total Selenium - Effluent	mg/L	Monthly Avg. Daily Max	-- --	-- --	MR MR	1/6 months	Grab
Acute Whole Effluent Toxicity (LC50) *Mysidopsis bahia*	% Effluent	Minimum	--	--	MR	1/Year	Composite

Footnotes and Abbreviations:

MR Monitor and report only

* Monitoring for Chromium is only required when additives containing Chromium are used at the generating station.

DSN 003A (Stormwater)

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA (1/2010 -9/2012)*	EXISTING LIMITS	FINAL LIMITS	MONITORING FREQUENCY	SAMPLE TYPE
Flow	MGD	Monthly Avg. Daily Max.	2.854 2.854	MR MR	MR MR	1/Month	Calculated
pH	s.u.	Minimum Maximum	6.7 6.91	6.0 9.0	6.0 9.0	2/Month	Grab
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max.	26.5 28	MR MR	30** 100**	2/Month	Grab
Total Organic Carbon (TOC)	mg/L	Monthly Avg. Daily Max.	-- --	-- --	MR MR	1/Month	Grab
Total Petroleum Hydrocarbons	mg/L	Monthly Avg. Daily Max.	<5.7 <5.7	10 15	10 15	2/Month	Grab
Total Recoverable Arsenic	µg/L	Monthly Avg. Daily Max.	<.003 <.003	MR** 0.136**	MR 0.136	1/Month	Grab
Total Recoverable Nickel	mg/L	Monthly Avg. Daily Max.	<.01 <.01	0.75** 1.5**	0.75 1.5	6/Year	Grab
Total Recoverable Zinc	mg/L	Monthly Avg. Daily Max.	<.02 <.02	0.5** 1.0**	0.5 1.0	6/Year	Grab
Acute Whole Effluent Toxicity (LC50) *Mysidopsis bahia*	%	Minimum	--***	50	--	--	--

Footnotes and Abbreviations:

MR Monitor and report only

* The data review for DSN003A begins in January 2010, after the closure of the slag ponds. The only discharge since that time occurred in January 2010; all monitoring forms after that point indicate "no discharge."

** Formerly applied as Net values.

*** There is WET data for DSN 003A, however, it was collected before the closure of the slag ponds. Between 8/2005 and 7/2009 there were six WET data values collected that were LC50 > 100%.

DSN 009A (Once through Cooling Water from Unit 1) and DSN 010A (Once through Cooling Water from Unit 2)

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA DSN 009A (3/2005-9/2012)	WASTEWATER DATA DSN 010A	EXISTING LIMITS for DSNs009A and 010A	FINAL LIMITS for DSNs 009A and 010A	MONITORING FREQUENCY for DSNs 009A and 010A	SAMPLE TYPE for DSNs 009A and 010A
Flow-Effluent	MGD	Monthly Avg. Daily Max.	76.98 451	69.06 138	MR MR	MR MR	Continuous	Calculated
Flow-Intake	MGD	Monthly Avg. Daily Max.	-- --	-- --	-- --	MR MR	Continuous	Calculated
pH – Effluent	s.u.	Minimum Maximum	7.22 8.2	7.2 8.3	6.0 9.0	6.0 9.0	3/Week	Grab
pH - Intake	s.u.	Minimum Maximum	7.26 8.2	7.2 8.3	MR MR	MR MR	3/Week	Grab
Temperature – Effluent September-May	°C	Monthly Avg. Daily Max.	18.34 37.8	15.72 32.6	MR 38.3	MR 38.3	Continuous	Metered
Temperature – Effluent June-August	°C	Monthly Avg. Daily Max.	29.06 38	27.32 36	MR 38.3	MR 38.3 (1)	Continuous	Metered
Temperature – Intake September-May	°C	Monthly Avg. Daily Max.	13.91 30	11.53 29.2	MR MR	MR MR	Continuous	Metered
Temperature – Intake June-August	°C	Monthly Avg. Daily Max.	24.76 33.8	24.20 32.7	MR MR	MR MR	Continuous	Metered
Heat – Net *	MBTU/ Hour	Monthly Avg. Daily Max.	374.5 1393.2	308.17 1514	MR 1530 *	MR 1530 *	1/Day	Calculated
Temperature – Difference June-August	°C	Monthly Avg. Daily Max. # data	3.54 8.5 24	2.66 12** 24	NL 8.8	NL 8.8 (1)	1/Day	Calculated
Temperature – Difference September-May	°C	Monthly Avg. Daily Max. # data	3.06 16.1 33	3.45 17 58	NL 19.3	NL 19.3	1/Day	Calculated
Petroleum Hydrocarbons	mg/L	Monthly Avg. Daily Max.	-- --	-- --	10*** 15***	10*** 15***	--	--
Chlorine Produced Oxidants	mg/L	Monthly Avg. Daily Max. # detect/# ND	0.05 0.19 35/16	0.036 0.12 51/20	NL**** 0.2****	NL**** 0.2****	3/Week	Grab
Arsenic, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- 4.3	-- --	MR MR	1/6 Months	Grab
Boron, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- --	-- 3800	-- --	MR MR	1/6 Months	Grab

Footnotes and Abbreviations:

MR Monitor and report only

* Heat – Net is the sum of the Heat-Net rate for DSNs 009 and 010.

** The 12 degree Celsius delta T exceedance occurred on June 6, 2011 and was reported to NJDEP in the June 2011 DMR. The permittee contends that at the time of the exceedance, only one circulating pump was operating as the second circulating pump malfunctioned due to excessive vibrations where the pump was then repaired. In addition, inconsistent readings were noted in the thermocouples measuring the delta T and new thermocouples were installed after the June 6, 2011 event.

*** Applied as a monthly requirement in Part IV.

**** Bromination shall occur for less than two hours per day.

(1) Once the station is repowered, an effluent temperature limit of 40.5 degrees Celsius is being imposed as a daily maximum for the months of June through August for DSN 010A only. Also, an **effluent net temperature difference limit** of 11.0 degrees Celsius as a daily maximum shall apply for the months of June through August.

DSN 013A (Wastewater Treatment Plant Effluent)

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA (3/2005-9/2012)	EXISTING LIMITS	FINAL LIMITS	MONITORING FREQUENCY	SAMPLE TYPE
Flow	MGD	Monthly Avg. Daily Max.	0.20 3.14	MR MR	MR MR	Continuous	Metered
pH	s.u.	Minimum Maximum	6.0 10.3	6.0 9.0	6.0 9.0	Continuous	Metered
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max. # detect/# non-detect	5.38 17 38/53	30 100	30 100	2/Month	4-Hour Composite
Total Organic Carbon	mg/L	Monthly Avg. Daily Max. # detect/# non-detect	1.56 13.6 69/21	21 MR	21 MR	1/Month	Grab
Total Organic Carbon	kg/day	Monthly Avg. Daily Max. # detect/# non-detect	1.68 25.2 69/21	MR MR	MR MR	1/Month	Grab
Petroleum Hydrocarbons	mg/L	Monthly Avg. Daily Max. # detect/# non-detect	2.33 5.0 8/83	10 15	10 15	2/Month	Grab
Dissolved Oxygen	mg/L	Daily Avg. Min. Instant. Min.	-- --	-- --	5.0 4.0	1/Month	Grab
Total Recoverable Chromium	mg/L	Monthly Avg. Daily Max. # detect/# non-detect	0.004 0.01 4/38	MR 0.2	MR 0.2	1/Quarter	4-Hour Composite
Total Recoverable Zinc	mg/L	Monthly Avg. Daily Max. # detect/# non-detect	0.03 0.13 15/28	MR 1.0	MR 1.0	1/Quarter	4-Hour Composite
Total Recoverable Copper	mg/L	Monthly Avg. Daily Max. # detect/# non-detect	5.3 48 25/62	MR 8.7	MR 8.7	1/Quarter	4-Hour Composite
Total Iron	mg/L	Monthly Avg. Daily Max. # detect/# non-detect	0.28 1.38 27/19	MR 1.0	MR 1.0	1/Quarter	4-Hour Composite
Total Recoverable Nickel	mg/L	Monthly Avg. Daily Max. # detect/# non-detect	0.011 0.04 9/35	MR 1.0	MR 1.0	1/Quarter	4-Hour Composite
Arsenic, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- 169	MR MR	MR MR	1/6 Months	4-Hour Composite
Selenium, Total Recoverable	µg/L	Monthly Avg. Daily Max.	-- 40	MR MR	MR MR	1/6 Months	4-Hour Composite
Acute Whole Effluent Toxicity (LC50) *Mysidopsis bahia*	%	Minimum # data	>100 8	50	50 (1)	1/Year	Composite

Footnotes and Abbreviations:

MR Monitor and report only

-- In the Wastewater Data column, "--" indicates that no data is available. In the Existing Limits or Final limits columns, this indicates that a limit is not or was not included.

(1) Action Level

DSN 014A (Flue Gas Desulfurization system discharge)

PARAMETER	UNITS	AVERAGING PERIOD	WASTEWATER DATA (3/2005-9/2012)	EXISTING LIMITS	FINAL LIMITS	MONITORING FREQUENCY	SAMPLE TYPE
Flow	MGD	Monthly Avg. Daily Max.	0.03 0.08	MR MR	MR MR	Continuous	Metered
pH	s.u.	Minimum Maximum	6.98 8.99	6.0 9.0	6.0 9.0	1/Day	Grab
BOD_5	mg/L	Monthly Avg. Daily Max. # detect/# non-detect	1.67 6.0 9/56	MR MR	MR MR	2/Month	4-Hour Composite
BOD_5	kg/day	Monthly Avg. Daily Max. # detect/# non-detect	0.12 0.84 9/56	MR MR	MR MR	2/Month	4-Hour Composite
Total Suspended Solids (TSS)	mg/L	Monthly Avg. Daily Max. # detect/# non-detect	18.77 169 44/21	30 100	30 100	2/Month	4-Hour Composite
Total Suspended Solids (TSS)	kg/day	Monthly Avg. Daily Max. # detect/# non-detect	1.26 12.8 44/21	8.18 27.25	8.18 27.25	2/Month	4-Hour Composite
Total Organic Carbon	mg/L	Monthly Avg. Daily Max. # detect/# non-detect	3.55 7.3 63/2	MR MR	MR MR	2/Month	4-Hour Composite
Total Organic Carbon	kg/day	Monthly Avg. Daily Max. # detect/# non-detect	0.39 3.1 63/2	MR MR	MR MR	2/Month	4-Hour Composite
Temperature	°C	Monthly Avg. Daily Max.	31.46 37	MR MR	MR MR	1/Day	Grab
Petroleum Hydrocarbons	mg/L	Monthly Avg. Daily Max. # detect/# non-detect	1.46 5.0 7/58	10 15	10 15	2/Month	Grab
Total Recoverable Arsenic	ug/L	Monthly Avg. Daily Max. # detect/# non-detect	26.11 112 27/37	830 1700	830 1700	1/Week	4-Hour Composite
Total Recoverable Arsenic	kg/day	Monthly Avg. Daily Max. # detect/# non-detect	0.002 0.011 27/37	0.23 0.45	0.23 0.45	1/Week	4-Hour Composite
Total Recoverable Copper	mg/L	Monthly Avg. Daily Max. # detect/# non-detect	65.95 500 13/52	1700 3500	1700 3500	1/Week	4-Hour Composite
Total Recoverable Copper	kg/day	Monthly Avg. Daily Max. # detect/# non-detect	0.006 0.04 13/52	0.47 0.95	0.47 0.95	1/Week	4-Hour Composite
Total Sulfide	mg/L	Monthly Avg. Daily Max. # detect/# non-detect	911 5000 9/54	3900 7900	3900 7900	1/Week	4-Hour Composite
Total Sulfide	kg/day	Monthly Avg. Daily Max. # detect/# non-detect	0.10 0.24 9/54	1.1 2.1	1.1 2.1	1/Week	4-Hour Composite
Total Recoverable Mercury	mg/L	Monthly Avg. Daily Max. # detect/# non-detect	0.22 1.6 12/53	49 98	49 98	1/Week	4-Hour Composite
Total Recoverable Mercury	kg/day	Monthly Avg. Daily Max. # detect/# non-detect	3E-05 0.0002 12/53	0.013 0.027	0.013 0.027	1/Week	4-Hour Composite
Whole Effluent Toxicity	%	Minimum # data	>100 9	50	50 (1)	1/Year	Composite

Footnotes and Abbreviations:

MR Monitor and report only

(1) Action Level

DSN 015A (Continuous Sequential Batch Reactor)

PARAMETER	UNITS	AVERAGING PERIOD	EXISTING LIMITS	FINAL LIMITS	MONITORING FREQUENCY	SAMPLE TYPE
Flow	MGD	Monthly Avg. Daily Max.	-- --	MR MR	Continuous	Metered
Fecal Coliform (geometric mean)	# per 100mL	Monthly Avg. Weekly Avg.	-- --	200 400	1/Month	Grab
Enterococci (geometric mean)	# per 100mL	Monthly Avg. Instant Max	-- --	MR MR	1/Month	Grab
pH	su	Instant. Min. Instant. Max.	-- --	6.0 9.0	1/Month	Grab
Ammonia (Total as N)	kg/d	Monthly Avg. Daily Max.	-- --	MR MR	1/Month	Grab
Ammonia (Total as N)	mg/L	Monthly Avg. Daily Max.	-- --	MR MR	1/Month	Grab

Footnotes and Abbreviations:

MR Monitor and report only

(1) This internal monitoring point is being introduced in this permit action, therefore there is no existing data.

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17 Contents of the Administrative Record

The following items are used to establish the basis of the Draft Permit:

Rules and Regulations:
1. 33 U.S.C. 1251 et seq., Federal Water Pollution Control Act. [C]
2. 40 CFR Part 131, Federal Water Quality Standards. [A] [C]
3. 40 CFR Part 122, National Pollutant Discharge Elimination System. [C]
4. N.J.S.A. 58:10A-1 et seq., New Jersey Water Pollution Control Act. [A] [B]
5. N.J.A.C. 7:14A-1 et seq., New Jersey Pollutant Discharge Elimination System Regulations. [A] [B]
6. N.J.A.C. 7:9B-1 et seq., New Jersey Surface Water Quality Standards. [A] [B]
7. N.J.A.C. 7:15, Statewide Water Quality Management Planning Rules. [A] [B]
8. N.J.A.C. 7:14C, Sludge Quality Assurance Regulations. [B]

Guidance Documents / Reports:
1. "Field Sampling Procedures Manual", published by the NJDEP. [A]
2. "NJPDES Monitoring Report Form Reference Manual", updated December 2007, and available on the web at http://www.state.nj.us/dep/dwq/pdf/MRF_Manual.pdf.
3. "EPA Technical Support Document for Water Quality-based Toxics Control", EPA/505/2-90-001, March 1991. [A]
4. New Jersey's 2010 Integrated Water Quality Monitoring and Assessment Report (includes 305 (b) Report 303(d) List). [A] [B]
5. RC Cape May Holdings, LLC, B.L. England Generating Station 316(b) Report, prepared by AKRF, Inc., dated February 2008.
6. 316(b) Proposal for Information Collection Prepared in Compliance with 40 CFR 125.95(b)(1) for B.L. England Generating Station, prepared by AKRF and submitted by Conectiv in June 2005.
7. Report On a 52-Week Study of Impingement at the B.L. England Generating Station with an evaluation of potential ecological consequences, prepared by Environmental Consulting Services, Inc. and submitted by the Atlantic City Electric Company in February 1991.
8. NJPDES permit application supplement dated March 2013.

Permits / Applications:
1. NJPDES/DSW Permit Application dated January 16, 2013. [A]
2. Existing NJPDES/DSW Permit NJ0005444, issued 1/11/05 and effective 3/1/05. [A]
3. Minor Modification to NJPDES/DSW Permit NJ0005444, issued 3/22/05 and effective on 3/1/05 to correct Mercury limit at DSN 014 and add monitoring for TOC mass loading at DSN 013. [A]

Correspondences:
1. Letter dated February 15, 2012 from Susan Rosenwinkel, Principal Environmental Engineer of NJDEP to Doug Mauro, EH & S Manager of RC Cape May Holdings LLC, authorizing disinfected effluent from the Continuous Sequential Batch Reactor (CSBR) to be routed through outfall DSN 013 conditional on non-detectable fecal coliform levels.
2. Letter dated January 4, 2006 from Pilar Patterson, Chief of NJDEP to Marilyn Booth, Sr. Environmental Consultant of Conectiv, regarding Approval of Proposal for Information Collection (PIC) for B.L. England Generating Station.

Meetings / Site Visits:
1. Site Visit on December 13, 2012.

Footnotes:
[A] Denotes items that may be found in the NJPDES/DSW Administrative Record Library located in the NJDEP Central File Room, 401 East State Street, Trenton, New Jersey.
[B] Denotes items that may be found on the New Jersey Department of Environmental Protection (NJDEP) website located at "http://www.state.nj.us/dep/".
[C] Denotes items that may be found on the United States Environmental Protection Agency (USEPA) website at "http://www.epa.gov/".

Table A: Effluent limitation analysis for the Toxic Metals, Organic Compounds, Cyanide, and other pollutants; effluent flow of 0.20 MGD for outfall DSN 013A and default stream hardness of 100 mg/L.

Parameter	Data set time period	Number of data points	Coefficient of variation (CV)	Maximum reported data value (µg/L) **A**	Calculated instream WLA (µg/L) **B**	"Cause" Y = yes N = no **A > B ?**	Aquatic criteria LTA (µg/L)	Water quality based limit, if applicable (µg/L)	Calculated EEQ maximum daily limit, if applicable (µg/L)
Copper** DSN013A	4/10 to 9/12	(dt) = 15 (nd) = 13	0.6 (d)	5.6 (max)	(a) = 19.2 (c) = 31 (h) = N/A (hc) = N/A	(a) = N (c) = N (h) = N/A (hc) = N/A	(a) = N/A (c) = N/A	MDL = N/A AML = N/A	N/A

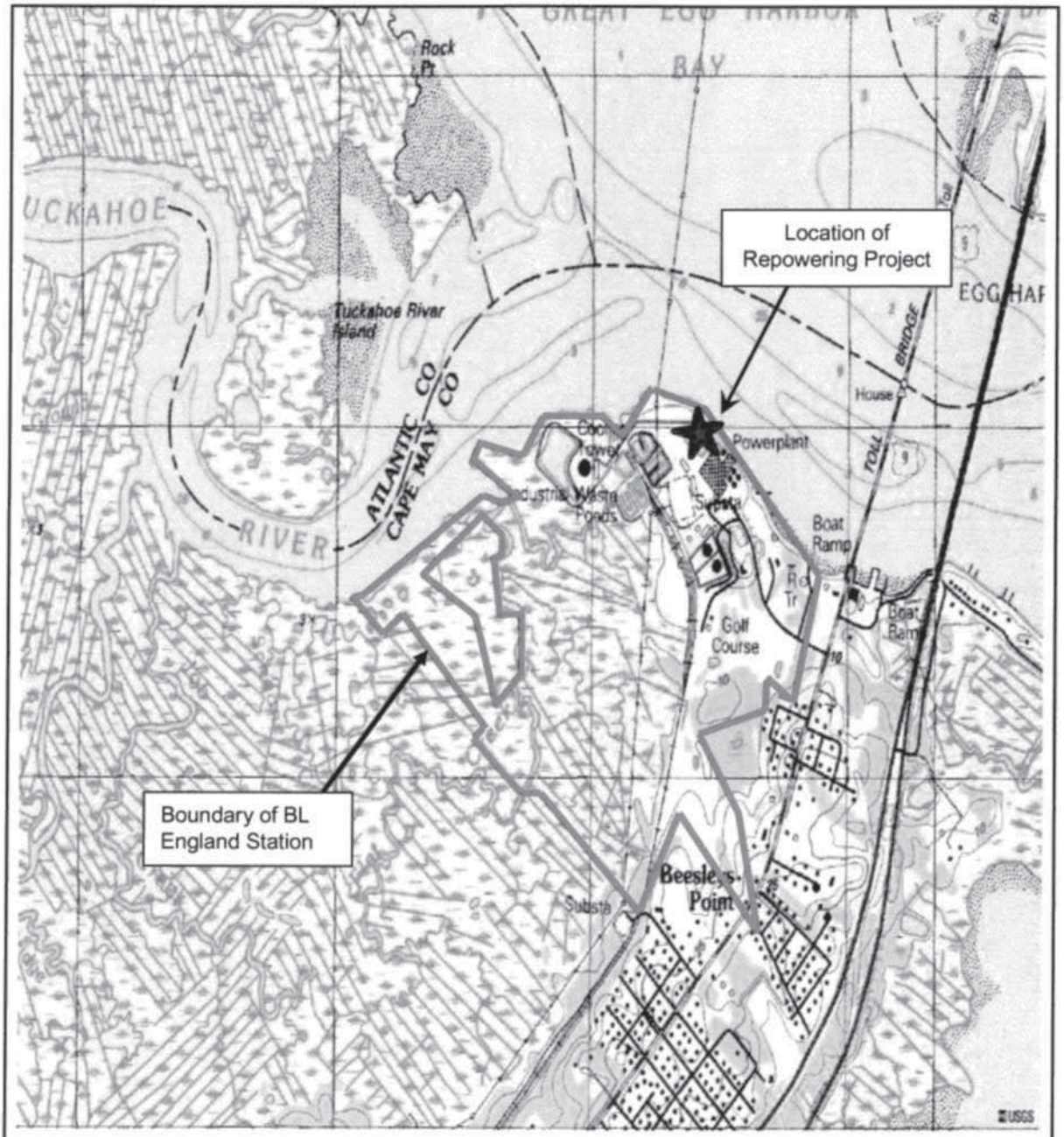
Footnotes and Abbreviations:

(dt) = Data values detected.
(nd) = Data values non-detected.
(d) = Default CV
(ca) = Calculated from data set.
(max) = Maximum
(LTAeq) = Long Term Average equivalent
(a) = acute aquatic
(c) = chronic aquatic
(h) = human health non-carcinogen
(hc) = human health carcinogen
(*) = Dissolved
(**) = Total Recoverable
LTA = Long Term Average
WLA = Waste Load Allocation
MDL = Maximum Daily Limit
AML = Average Monthly Limit
EEQ = Existing Effluent Quality
N/A = Not Applicable
MR = Monitor and Report

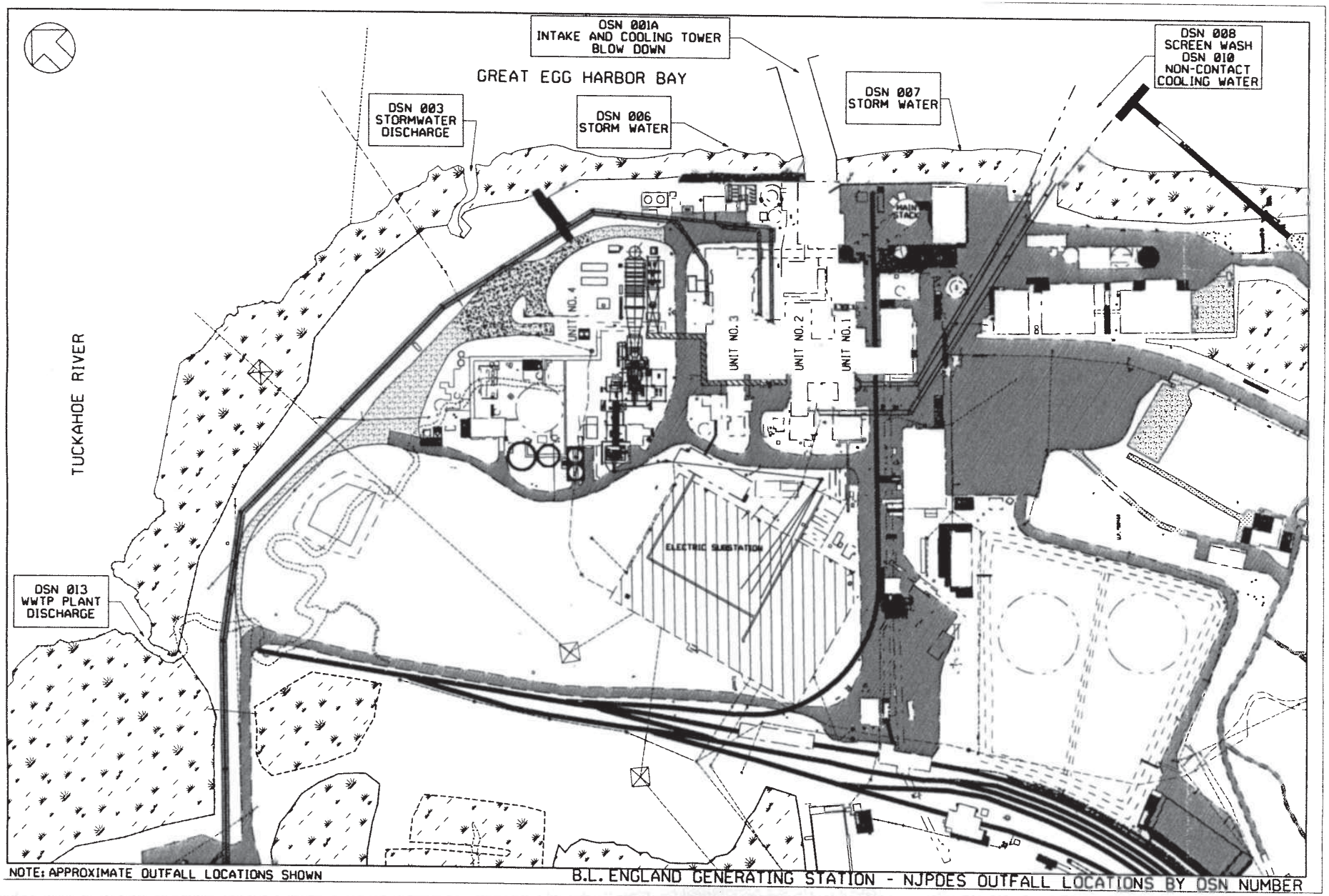
17 Listing of Acronyms:

ACEC	Atlantic City Electric Company
ACO	Administrative Consent Order
BAR	Bottom Ash Removal
BAT	Best Available Technology
BCT	Best Conventional Technology
BLE	B.L. England Generating Station
BIP	Balanced Indigenous Population
BMPs	Best Management Practices
BPJ	Best Professional Judgment
BTA	Best Technology Available
CDS	Comprehensive Demonstration Study
CFR	Code of Federal Regulations
COD	Chemical Oxygen Demand
CORMIX	Cornell Mixing Zone Expert System
CPO	Chlorine Produced Oxygen
CSBR	Continuous Sequential Batch Reactor
CWA	Clean Water Act
CWS	Cooling Water System
CWIS	Cooling Water Intake Structure
DCR	Discharge Cleanup and Removal Plan
DMR	Discharge Monitoring Report Form
DO	Dissolved Oxygen
DPCC	Discharge Prevention, Containment and Countermeasure Plan
DSN	Discharge Serial Number
EDP	Effective Date of Permit
EPA	Environmental Protection Agency
FGD	Flue Gas Desulurization
GEHB	Great Egg Harbor Bay
GPM	Gallons Per Minute
HRSG	Heat Recovery Steam Generator
LIM	Latent Impingement Mortality
MBTU	1,000 British Thermal Units
MGD	Million Gallons Per Day
MLW	Mean Low Water
MR	Monitor and Report
MRF	Monitoring Report Form
MW	Megawatts
N.J.A.C.	New Jersey Administrative Code
NJPDES	New Jersey Pollutant Discharge Elimination System
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
PIC	Proposal for Information Collection
RIS	Representative Important Species
RTR	Residual Transfer Report
RQL	Recommended Quantitation Level
SIC	Standard Industrial Classification
SPPP	Stormwater Pollution Prevention Plan
STORET	EPA’s Storage and Retrieval Data Warehouse
S.U.	Standard Units

SWQS	NJ Surface Water Quality Standards
TRIR	Toxicity Reduction and Implementation Requirements
TSD	Technical Support Document
TSS	Total Suspended Solids
USFWS	United States Fish and Wildlife Service
WCR	Wastewater Characterization Report
WET	Whole Effluent Toxicity
WMP	Watershed Management Plan
WQBEL	Water Quality Based Effluent Limitation
WQMP	Water Quality Management Plan
WWTP	Wastewater Treatment Plant
ZID	Zone of Initial Dilution



Scale: Not to scale	RC Cape May Holdings, LLC BL England – Repowering Project USGS Marmora Quadrangle 2007 = Approximate Project Location	**Site Locus** B.L. England Generating Station Cape May County, NJ April 2012	Figure 1 USGS Location Map AECOM



NOTE: APPROXIMATE OUTFALL LOCATIONS SHOWN

B.L. ENGLAND GENERATING STATION - NJPDES OUTFALL LOCATIONS BY OSN NUMBER

NEW JERSEY POLLUTANT DISCHARGE ELIMINATION SYSTEM

The New Jersey Department of Environmental Protection hereby grants you a NJPDES permit for the facility/activity named in this document. This permit is the regulatory mechanism used by the Department to help ensure your discharge will not harm the environment. By complying with the terms and conditions specified, you are assuming an important role in protecting New Jersey's valuable water resources. Your acceptance of this permit is an agreement to conform with all of its provisions when constructing, installing, modifying, or operating any facility for the collection, treatment, or discharge of pollutants to waters of the state. If you have any questions about this document, please feel free to contact the Department representative listed in the permit cover letter. Your cooperation in helping us protect and safeguard our state's environment is appreciated.

Permit Number: NJ0005444

Draft: Consolidated Renewal Permit Action

Permittee:

RC Cape May Holdings LLC
900 N Shore Rd
Beesleys Point, NJ 08223

Property Owner:
RC Cape May Holdings LLC
c/o Rockland Capital Energy
2204 Timberloch Pl - Ste 190
Investments
The Woodlands, TX 77380

Location Of Activity:

B L England Generating Station
900 N Shore Rd
Beesleys Point, NJ
Cape May County

Authorization(s) Covered Under This Approval	Issuance Date	Effective Date	Expiration Date
B -Industrial Wastewater RF -Stormwater	Pending	Pending	Pending

By Authority of:
Commissioner's Office

DEP AUTHORIZATION
Pilar Patterson, Chief
Bureau of Surface Water Permitting
Division of Water Quality

(Terms, conditions and provisions attached hereto)

PART I
GENERAL REQUIREMENTS: NJPDES

A. General Requirements of all NJPDES Permits

1. Requirements Incorporated by Reference

a. The permittee shall comply with all conditions set forth in this permit and with all the applicable requirements incorporated into this permit by reference. The permittee is required to comply with the regulations, including those cited in paragraphs b. through e. following, which are in effect as of the effective date of the final permit.

b. General Conditions

Penalties for Violations	N.J.A.C. 7:14-8.1 et seq.
Incorporation by Reference	N.J.A.C. 7:14A-2.3
Toxic Pollutants	N.J.A.C. 7:14A-6.2(a)4i
Duty to Comply	N.J.A.C. 7:14A-6.2(a)1 & 4
Duty to Mitigate	N.J.A.C. 7:14A-6.2(a)5 & 11
Inspection and Entry	N.J.A.C. 7:14A-2.11(e)
Enforcement Action	N.J.A.C. 7:14A-2.9
Duty to Reapply	N.J.A.C. 7:14A-4.2(e)3
Signatory Requirements for Applications and Reports	N.J.A.C. 7:14A-4.9
Effect of Permit/Other Laws	N.J.A.C. 7:14A-6.2(a)6 & 7 & 2.9(c)
Severability	N.J.A.C. 7:14A-2.2
Administrative Continuation of Permits	N.J.A.C. 7:14A-2.8
Permit Actions	N.J.A.C. 7:14A-2.7(c)
Reopener Clause	N.J.A.C. 7:14A-6.2(a)10
Permit Duration and Renewal	N.J.A.C. 7:14A-2.7(a) & (b)
Consolidation of Permit Process	N.J.A.C. 7:14A-15.5
Confidentiality	N.J.A.C. 7:14A-18.2 & 2.11(g)
Fee Schedule	N.J.A.C. 7:14A-3.1
Treatment Works Approval	N.J.A.C. 7:14A-22 & 23

c. Operation And Maintenance

Need to Halt or Reduce not a Defense	N.J.A.C. 7:14A-2.9(b)
Proper Operation and Maintenance	N.J.A.C. 7:14A-6.12

d. Monitoring And Records

Monitoring	N.J.A.C. 7:14A-6.5
Recordkeeping	N.J.A.C. 7:14A-6.6
Signatory Requirements for Monitoring Reports	N.J.A.C. 7:14A-6.9

e. Reporting Requirements

Planned Changes	N.J.A.C. 7:14A-6.7
Reporting of Monitoring Results	N.J.A.C. 7:14A-6.8
Noncompliance Reporting	N.J.A.C. 7:14A-6.10 & 6.8(h)
Hotline/Two Hour & Twenty-four Hour Reporting	N.J.A.C. 7:14A-6.10(c) & (d)
Written Reporting	N.J.A.C. 7:14A-6.10(e) &(f) & 6.8(h)
Duty to Provide Information	N.J.A.C. 7:14A-2.11, 6.2(a)14 & 18.1
Schedules of Compliance	N.J.A.C. 7:14A-6.4
Transfer	N.J.A.C. 7:14A-6.2(a)8 & 16.2

PART II

GENERAL REQUIREMENTS: DISCHARGE CATEGORIES

A. Additional Requirements Incorporated By Reference

1. No Additional Requirements Incorporated by Reference

2. Requirements for Discharges to Surface Waters

a. In addition to conditions in Part I of this permit, the conditions in this section are applicable to activities at the permitted location and are incorporated by reference. The permittee is required to comply with the regulations which are in effect as of the effective date of the final permit.

i. Surface Water Quality Standards N.J.A.C. 7:9B-1

ii. Water Quality Management Planning Regulations N.J.A.C. 7:15

B. General Conditions

1. Scope

a. The issuance of this permit shall not be considered as a waiver of any applicable federal, state, and local rules, regulations and ordinances.

2. Permit Renewal Requirement

a. Permit conditions remain in effect and enforceable until and unless the permit is modified, renewed or revoked by the Department.

b. Submit a complete permit renewal application: 180 days before the Expiration Date.

3. Notification of Non-Compliance

a. The permittee shall notify the Department of all non-compliance when required in accordance with N.J.A.C. 7:14A-6.10 by contacting the DEP HOTLINE at 1-877-WARNDEP (1-877-927-6337).

b. The permittee shall submit a written report as required by N.J.A.C. 7:14A-6.10 within five days.

4. Notification of Changes

a. The permittee shall give written notification to the Department of any planned physical or operational alterations or additions to the permitted facility when the alteration is expected to result in a significant change in the permittee's discharge and/or residuals use or disposal practices including the cessation of discharge in accordance with N.J.A.C. 7:14A-6.7.

b. Prior to any change in ownership, the current permittee shall comply with the requirements of N.J.A.C. 7:14A-16.2, pertaining to the notification of change in ownership.

5. Access to Information

a. The permittee shall allow an authorized representative of the Department, upon the presentation of credentials, to enter upon a person's premises, for purposes of inspection, and to access / copy any records that must be kept under the conditions of this permit.

6. Stormwater Discharge Authorization

a. The permittee shall discharge stormwater to surface waters and/or ground waters of the State only as authorized herein and consistent with the terms and conditions of this permit. This permit does not authorize any unpermitted discharge of domestic wastewater, non-contact cooling water, leachate, or process water, unless otherwise stated in Part IV of the Permit.

7. Other Discharges

a. If, during or after the preparation of the SPPP, it is discovered that the facility generates and discharges to surface waters and/or ground water any domestic wastewater, non-contact cooling water, or process waste water (including leachate and cooling water), not authorized by this permit or any other NJPDES permit, the permittee shall discontinue such discharges and apply for the appropriate NJPDES DSW permit in accordance with the NJPDES rules at N.J.A.C. 7:14A.

8. Operator Certification

a. For stormwater only discharges pursuant to N.J.A.C. 7:10A-1.10, the facility operator is exempt from the operator certification requirements unless otherwise required by this permit .

9. Monitoring Locations

a. All samples shall be taken at the monitoring points specified in Part III of this permit and, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water or substance. Sampling points shall not be changed without notification to and the approval of the Department.

10. Stormwater/Intermittent Discharges

a. The permittee is required to ensure that samples and measurements taken for the purposes of monitoring are representative of the monitored activity pursuant to N.J.A.C. 7:14A-6.5(a). This includes any regulated intermittent activity or discharge. Therefore, although a discharge may occur on an intermittent basis, it does not exempt the permittee from complying with the conditions of the permit. For example, if a permittee has a monthly monitoring and reporting requirement and the discharge occurs three separate times during the month, the permittee should obtain a sample during at least one of the discharge events occurring during the monitoring period.

i. The permittee should check "No Discharge this monitoring period" on the monitoring report transmittal sheet only if there are no discharge events during the entire reporting period.

11. Removed Substances/Residuals

a. This permit does not authorize discharge of solids, sludge, filter backwash or other pollutants removed in the course of treatment or control to the waters of the State unless specifically authorized in this permit. All solids, sludge, filter backwash, or other pollutants removed from, or resulting from the treatment or control of discharges must be disposed of in accordance with all applicable Federal, State, Local and other appropriate agency requirements.

12. Outfall Tagging and Monitoring Location Tagging

a. All permittees with discharges that flow through an outfall with a Discharge Serial Number (DSN), shall identify the outfall with an outfall tag or posted sign. The outfall tag or posted sign shall be:

i. legible from twenty-five (25) feet, with a minimum of one (1) inch lettering;

ii. visible to the public from the land and water (if applicable)

iii. located as near to the end of the outfall as possible;

iv. made of durable, weather resistant material; and

v. maintained on a regular basis, such as cleaned and inspected to ensure that the tag is properly attached.

b. The outfall tag shall display, at minimum, the following information:

i. the name of the facility where the discharge originates;

ii. the NJPDES permit number;

iii. the Department Hotline phone number; and

iv. the DSN for that particular outfall.

c. If the monitoring locations are different than the outfall locations, monitoring locations shall also be identified with a tag or posted sign. The tag or posted sign shall be:

i. legible;

ii. made of durable, weather resistant material; and

iii. maintained on a regular basis, such as cleaned and inspected to ensure that the tag is properly attached.

d. The monitoring location tag shall display, at minimum, the following information:

i. the DSN.

13. Operator Certification

a. Pursuant to N.J.A.C. 7:10A-1.1 et seq. every wastewater system not exempt pursuant to N.J.A.C. 7:10A-1.1(b) requires a licensed operator. The operator of a system shall meet the Department's requirements pursuant to N.J.A.C. 7:10A-1.1 and any amendments. The name of the proposed operator, where required shall be submitted to the Department at the address below, in order that his/her qualifications may be determined prior to initiating operation of the treatment works.

i. Notifcations shall be submitted to:
NJDEP
Examination and Licensing Unit
P.O. Box 420 Mail Code 401-04E
Trenton, New Jersey 08625-0420
(609)777-1012.

b. The permittee shall notify the Department of any changes in licensed operator within two weeks of the change.

14. Operation Restrictions

a. The operation of a waste treatment or disposal facility shall at no time create: (a) a discharge, except as authorized by the Department in the manner and location specified in Part III of this permit; (b) any discharge to the waters of the state or any standing or ponded condtion for water or waste, except as specifically authorized by a valid NJPDES permit.

15. Residuals Management

a. The permittee shall comply with land-based sludge management criteria and shall conform with the requirements for the management of residuals and grit and screenings under N.J.A.C. 7:14A-6.15(a), which includes:

i. Standards for the Use or Disposal of Residual, N.J.A.C. 7:14A-20;

ii. Section 405 of the Federal Act governing the disposal of sludge from treatment works treating domestic sewage;

iii. The Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq., and the Solid Waste Management Rules, N.J.A.C. 7:26;

iv. The Sludge Quality Assurance Regulations, N.J.A.C. 7:14C;

v. The Statewide Sludge Management Plan promulgated pursuant to the Water Quality Planning Act, N.J.S.A. 58:11A-1 et seq., and the Solid Waste Management Act, N.J.S.A. 13:1E-1 et seq.; and

vi. The provisions concerning disposal of sewage sludge and septage in sanitary landfills set forth at N.J.S.A. 13:1E-42 and the Statewide Sludge Management Plan.

vii. Residual that is disposed in a municipal solid waste landfill unit shall meet the requirements in 40 CFR Part 258 and/or N.J.A.C. 7:26 concerning the quality of residual disposed in a municipal solid waste landfill unit. (That is, passes the Toxicity Characteristic Leaching Procedure and does not contain "free liquids" as defined at N.J.A.C. 7:14A-1.2.)

b. If any applicable standard for residual use or disposal is promulgated under section 405(d)of the Federal Act and Sections 4 and 6 of the State Act and that standard is more stringent than any limitation on the pollutant or practice in the permit, the Department may modify or revoke and reissue the permit to conform to the standard for residual use or disposal.

c. The permittee shall make provisions for storage, or some other approved alternative management strategy, for anticipated downtimes at a primary residual management alternative. The permittee shall not be permitted to store residual beyond the capacity of the structural treatment and storage components of the treatment works. N.J.A.C. 7:14A-20.8(a) and N.J.A.C. 7:26 provide for the temporary storage of residuals for periods not exceeding six months, provided such storage does not cause pollutants to enter surface or ground waters of the State. The storage of residual for more than six months is not authorized under this permit. However, this prohibition does not apply to residual that remains on the land for longer than six months when the person who prepares the residual demonstrates that the land on which the residual remains is not a surface disposal site or landfill. The demonstration shall explain why residual must remain on the land for longer than six months prior to final use or disposal, discuss the approximate time period during which the residual shall be used or disposed and provide documentation of ultimate residual management arrangements. Said demonstration shall be in writing, be kept on file by the person who prepares residual, and submitted to the Department upon request.

d. The permittee shall comply with the appropriate adopted District Solid Waste or Sludge Management Plan (which by definition in N.J.A.C. 7:14A-1.2 includes Generator Sludge Management Plans), unless otherwise specifically exempted by the Department.

e. The preparer must notify and provide information necessary to comply with the N.J.A.C. 7:14A-20 land application requirements to the person who applies bulk residual to the land. This shall include, but not be limited to, the applicable recordkeeping requirements and certification statements of 40 CFR 503.17 as referenced at N.J.A.C 7:14A-20.7(j).

f. The preparer who provides biosolids to another person who further prepares the biosolids for application to the land must provide this person with notification and information necessary to comply with the N.J.A.C. 7:14A-20 land application requirements.

g. Any person who prepares bulk residual in New Jersey that is applied to land in a State other than New Jersey shall comply with the requirement at N.J.A.C. 7:14A-20.7(b)1.ix to submit to the Department written proof of compliance with or satisfaction of all applicable statutes, regulations, and guidelines of the state in which land application will occur.

PART III
LIMITS AND MONITORING REQUIREMENTS

MONITORED LOCATION:	RECEIVING LOCATION:	DISCHARGE CATEGORY(IES):
001A SW Outfall DSN 001A	Great Egg Harbor Bay	B - Industrial Wastewater

Location Description

Effluent samples for DSN 001A shall be taken at the sampling station located at the boiler blowdown pipe prior to discharge via DSN 001A.

Contributing Waste Types

Cooling tower blowdown

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

Monitoring for Chromium is only required if cooling tower additives that contain Chromium are used during the month specified on the monitoring report form. If cooling tower additives containing Chromium are not used during that month then the permittee shall report "CODE=N."

Table III - A - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Calculated
January thru December	QL	***	***		***	***	***			
Flow, In Conduit or Thru Treatment Plant	Intake From Stream	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Calculated
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Daily Minimum	*****	9.0 Daily Maximum	SU	2/Week	Grab
January thru December	QL	***	***		***	***	***			
pH	Intake From Stream	*****	*****	*****	REPORT Daily Minimum	*****	REPORT Daily Maximum	SU	2/Week	Grab
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

Monitoring for Chromium is only required if cooling tower additives that contain Chromium are used during the month specified on the monitoring report form. If cooling tower additives containing Chromium are not used during that month then the permittee shall report "CODE=N."

Table III - A - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Solids, Total Suspended	Effluent Net Value	*****	*****	*****	*****	30 Monthly Average	100 Daily Maximum	MG/L	1/Month	Calculated
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Intake From Stream	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
LC50 Statre 96hr Acu Mysid Bahia	Effluent Gross Value	*****	*****	*****	REPORT Report Per Minimum	*****	*****	%EFFL	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Chlorine Produced Oxidants	Effluent Gross Value	*****	*****	*****	*****	0.2 Monthly Average	0.5 Daily Maximum	MG/L	3/Week	Grab
January thru December	RQL	***	***		***	0.1	0.1			
Temperature, oC	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	DEG.C	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Temperature, oC	Intake From Stream	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	DEG.C	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Carbon, Tot Organic (TOC)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

Monitoring for Chromium is only required if cooling tower additives that contain Chromium are used during the month specified on the monitoring report form. If cooling tower additives containing Chromium are not used during that month then the permittee shall report "CODE=N."

Table III - A - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Net Rate of Addition of Heat	Effluent Gross Value	REPORT Monthly Average	50 Daily Maximum	MBTU/HR	*****	*****	*****	*****	1/Day	Calculated
January thru December	QL	***	***		***	***	***			
Selenium, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	Grab
January thru December	RQL	***	***		***	10	10			
Chromium, Total (as Cr)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	Grab
January thru December	RQL	***	***		***	0.01	0.01			
Chromium, Total (as Cr)	Effluent Net Value	*****	*****	*****	*****	REPORT Monthly Average	0.2 Daily Maximum	MG/L	1/Month	Grab
January thru December	RQL	***	***		***	0.01	0.01			
Chromium, Total (as Cr)	Intake From Stream	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	Grab
January thru December	RQL	***	***		***	0.01	0.01			
Nickel, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	Grab
January thru December	RQL	***	***		***	10	10			
Zinc, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	Grab
January thru December	RQL	***	***		***	0.03	0.03			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

Monitoring for Chromium is only required if cooling tower additives that contain Chromium are used during the month specified on the monitoring report form. If cooling tower additives containing Chromium are not used during that month then the permittee shall report "CODE=N."

Table III - A - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Zinc, Total Recoverable	Effluent Net Value	*****	*****	*****	*****	REPORT Monthly Average	1 Daily Maximum	MG/L	1/Month	Grab
January thru December	RQL	***	***		***	0.03	0.03			
Zinc, Total Recoverable	Intake From Stream	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	Grab
January thru December	RQL	***	***		***	0.03	0.03			
Copper, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	Grab
January thru December	RQL	***	***		***	10	10			

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Manganese, Total Recoverable	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Cyanide, Total (as CN)	Effluent Gross Value	REPORT RQL = 40	UG/L	Grab	January thru December
Arsenic, Total Recoverable (as As)	Effluent Gross Value	REPORT RQL = 8	UG/L	Grab	January thru December
Thallium, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Beryllium, Total Recoverable (as Be)	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Barium, Total Recoverable (as Ba)	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Silver, Total Recoverable	Effluent Gross Value	REPORT RQL = 2	UG/L	Grab	January thru December
Cadmium, Total Recoverable	Effluent Gross Value	REPORT RQL = 4	UG/L	Grab	January thru December
Lead, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Antimony, Total Recoverable	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Mercury Total Recoverable	Effluent Gross Value	REPORT RQL = 1	UG/L	Grab	January thru December
Acenaphthylene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Acenaphthene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	Grab	January thru December
Anthracene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Benzo(b)fluoranthene (3,4-benzo)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Benzo(k)fluoranthene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Benzo(a)pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Bis(2-chloroethyl) ether	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Bis(2-chloroethoxy) methane	Effluent Gross Value	REPORT RQL = 26.5	UG/L	Grab	January thru December
Bis (2-chloroiso-propyl) ether	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Butyl benzyl phthalate	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Chrysene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Diethyl phthalate	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Dimethyl phthalate	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
1,2-Diphenyl-hydrazine	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Fluoranthene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Fluorene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Hexachlorocyclo-pentadiene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Hexachloroethane	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Indeno(1,2,3-cd)-pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Isophorone	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
N-nitrosodi-n-propylamine	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
N-nitrosodiphenyl-amine	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
N-nitrosodimethyl-amine	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Nitrobenzene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Phenanthrene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Benzo(ghi)perylene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Benzo(a)anthracene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
1,2-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
1,2,4-Trichloro-benzene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Dibenzo(a,h) anthracene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
1,3-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
1,4-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
2-Chloronaphthalene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	Grab	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Di-n-octyl Phthalate	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
2,4-Dinitrotoluene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
2,6-Dinitrotoluene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	Grab	January thru December
3,3'-Dichloro-benzidine	Effluent Gross Value	REPORT RQL = 60	UG/L	Grab	January thru December
4-Bromophenyl phenyl ether	Effluent Gross Value	REPORT RQL = 9.5	UG/L	Grab	January thru December
Naphthalene	Effluent Gross Value	REPORT RQL = 8	UG/L	Grab	January thru December
Bis(2-ethylhexyl) phthalate	Effluent Gross Value	REPORT RQL = 30	UG/L	Grab	January thru December
Di-n-butyl phthalate	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Benzidine	Effluent Gross Value	REPORT RQL = 50	UG/L	Grab	January thru December
Malathion	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Demeton	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Hexachlorobenzene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Hexachlorobutadiene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Mirex	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
1,3-Dichloropropene	Effluent Gross Value	REPORT RQL = 7	UG/L	Grab	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
1,2,4,5-Tetrachloro-benzene	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
N-nitrosodiethyl-amine	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
N-nitrosopyrrolidine	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Carbon Tetrachloride	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,2-Dichloroethane	Effluent Gross Value	REPORT RQL = 3	UG/L	Grab	January thru December
Bromoform	Effluent Gross Value	REPORT RQL = 8	UG/L	Grab	January thru December
Chloroform	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
Toluene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Benzene	Effluent Gross Value	REPORT RQL = 7	UG/L	Grab	January thru December
Acrolein	Effluent Gross Value	REPORT RQL = 50	UG/L	Grab	January thru December
Acrylonitrile	Effluent Gross Value	REPORT RQL = 50	UG/L	Grab	January thru December
Chlorobenzene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Chlorodibromomethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Ethylbenzene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Methyl Bromide	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Methyl Chloride	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Methylene Chloride	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Tetrachloroethylene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
Trichlorofluoro- methane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
1,1-Dichloroethane	Effluent Gross Value	REPORT RQL = 23.5	UG/L	Grab	January thru December
1,1-Dichloroethylene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,1-Trichloro- ethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,2-Trichloro- ethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,2,2-Tetrachloro- ethane	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
1,2-Dichloropropane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
1,2-trans-Dichloro- ethylene	Effluent Gross Value	REPORT RQL = 4	UG/L	Grab	January thru December
2-Chloroethyl Vinyl Ether (Mixed)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Bromodichloromethane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
Vinyl Chloride	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Trichloroethylene	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Methoxychlor	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
N-Nitrosodi-n-butylamine	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Chloroethane	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Parachloro-m-cresol	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Parathion	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Phenols	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
2,4,5-Trichloro-phenol	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Delta BHC, Total (ug/l)	Effluent Gross Value	REPORT RQL = 0.02	UG/L	Grab	January thru December
Endosulfan Sulfate	Effluent Gross Value	REPORT RQL = 0.08	UG/L	Grab	January thru December
Beta Endosulfan	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Alpha Endosulfan	Effluent Gross Value	REPORT RQL = 0.02	UG/L	Grab	January thru December
Endrin Aldehyde	Effluent Gross Value	REPORT RQL = 0.1	UG/L	Grab	January thru December
PCB-1016 (Arochlor 1016)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
2,3,7,8-Tetrachloro-dibenzo-p-dioxin	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
4,4'-DDT(p,p'-DDT)	Effluent Gross Value	REPORT RQL = 0.06	UG/L	Grab	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
4,4'-DDD(p,p'-DDD)	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
4,4'-DDE(p,p'-DDE)	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Aldrin	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Alpha BHC	Effluent Gross Value	REPORT RQL = 0.02	UG/L	Grab	January thru December
Beta BHC	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Gamma BHC (lindane),	Effluent Gross Value	REPORT RQL = 0.03	UG/L	Grab	January thru December
Chlordane	Effluent Gross Value	REPORT RQL = 0.2	UG/L	Grab	January thru December
Dieldrin	Effluent Gross Value	REPORT RQL = 0.03	UG/L	Grab	January thru December
Endosulfans, Total (alpha and beta)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Endrin	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Toxaphene	Effluent Gross Value	REPORT RQL = 1	UG/L	Grab	January thru December
Heptachlor	Effluent Gross Value	REPORT RQL = 0.02	UG/L	Grab	January thru December
Heptachlor Epoxide	Effluent Gross Value	REPORT RQL = 0.4	UG/L	Grab	January thru December
PCB-1221 (Arochlor 1221)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
PCB-1232 (Arochlor 1232)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
PCB-1242 (Arochlor 1242)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
PCB-1248 (Arochlor 1248)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
PCB-1254 (Arochlor 1254)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
PCB-1260 (Arochlor 1260)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Polychlorinated Biphenyls (PCBs)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Chlorpyrifos	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
2-Chlorophenol	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
2-Nitrophenol	Effluent Gross Value	REPORT RQL = 18	UG/L	Grab	January thru December
2,4-Dichlorophenol	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
2,4-Dimethylphenol	Effluent Gross Value	REPORT RQL = 13.5	UG/L	Grab	January thru December
2,4-Dinitrophenol	Effluent Gross Value	REPORT RQL = 40	UG/L	Grab	January thru December
2,4,6-Trichloro-phenol	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
4-Chlorophenyl phenyl ether	Effluent Gross Value	REPORT RQL = 21	UG/L	Grab	January thru December
4-Nitrophenol	Effluent Gross Value	REPORT RQL = 12	UG/L	Grab	January thru December
4,6-Dinitro-o-cresol	Effluent Gross Value	REPORT RQL = 60	UG/L	Grab	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - A - 2: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Phenol Single Compound	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Pentachlorophenol	Effluent Gross Value	REPORT RQL = 30	UG/L	Grab	January thru December
Pentachlorobenzene	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Guthion	Effluent Gross Value	REPORT	UG/L	Grab	January thru December

MONITORED LOCATION:	RECEIVING LOCATION:	DISCHARGE CATEGORY(IES):
003A SW Outfall DSN 003A	Great Egg Harbor Bay	RF - Stormwater

Location Description

Effluent samples for DSN 003A shall be taken via a grab sample prior to discharge.

Contributing Waste Types

Storm Water Runoff

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Table III - B - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	1/Month	Calculated
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Daily Minimum	*****	9.0 Daily Maximum	SU	2/Month	Grab
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Effluent Gross Value	*****	*****	*****	*****	30 Monthly Average	100 Daily Maximum	MG/L	2/Month	Grab
January thru December	QL	***	***		***	***	***			
Petroleum Hydrocarbons	Effluent Gross Value	*****	*****	*****	*****	10 Monthly Average	15 Daily Maximum	MG/L	2/Month	Grab
January thru December	QL	***	***		***	***	***			
Carbon, Tot Organic (TOC)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Table III - B - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Arsenic, Total Recoverable (as As)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	0.136 Daily Maximum	UG/L	1/Quarter	Grab
January thru December	RQL	***	***		***	8	8			
Nickel, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	0.75 Monthly Average	1.5 Daily Maximum	MG/L	6/Year	Grab
January thru December	RQL	***	***		***	0.01	0.01			
Zinc, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	0.5 Monthly Average	1.0 Daily Maximum	MG/L	6/Year	Grab
January thru December	RQL	***	***		***	0.03	0.03			

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - B - 2: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Manganese, Total Recoverable	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Cyanide, Total (as CN)	Effluent Gross Value	REPORT RQL = 40	UG/L	Grab	January thru December
Selenium, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Thallium, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Beryllium, Total Recoverable (as Be)	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Barium, Total Recoverable (as Ba)	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Silver, Total Recoverable	Effluent Gross Value	REPORT RQL = 2	UG/L	Grab	January thru December
Cadmium, Total Recoverable	Effluent Gross Value	REPORT RQL = 4	UG/L	Grab	January thru December
Lead, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Chromium, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Copper, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Antimony, Total Recoverable	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Mercury Total Recoverable	Effluent Gross Value	REPORT RQL = 1	UG/L	Grab	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - B - 2: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Phenols	Effluent Gross Value	REPORT	UG/L	Grab	January thru December

MONITORED LOCATION:	RECEIVING LOCATION:	DISCHARGE CATEGORY(IES):
006A Stormwater	Great Egg Harbor Bay	RF - Stormwater

Location Description

Effluent samples for DSN 006A shall be taken via a grab sample prior to discharge.

Contributing Waste Types

Storm Water Runoff

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - C - 1: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Date of Storm Event	Effluent Gross Value	REPORT	MM/DD/YY	Calculated	January thru December
Time Storm Event Began	Effluent Gross Value	REPORT	STD TIME	Calculated	January thru December
Storm Event Duration	Effluent Gross Value	REPORT	# HOURS	Calculated	January thru December
Hours Since Last Storm Event	Effluent Gross Value	REPORT	# HOURS	Calculated	January thru December
Time of Sample Collection	Effluent Gross Value	REPORT	STD TIME	Calculated	January thru December
Rainfall Amount at Time of Sampling	Effluent Gross Value	REPORT	# INCHES	Calculated	January thru December
pH	Effluent Gross Value	REPORT	SU	Grab	January thru December
Solids, Total Suspended	Effluent Gross Value	REPORT	MG/L	Grab	January thru December
Oil and Grease	Effluent Gross Value	REPORT	MG/L	Grab	January thru December
Petrol Hydrocarbons, Total Recoverable	Effluent Gross Value	REPORT	MG/L	Grab-3	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - C - 1: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Oxygen Demand,Chem. (High Level) (COD)	Effluent Gross Value	REPORT	MG/L	Grab	January thru December

MONITORED LOCATION:	RECEIVING LOCATION:	DISCHARGE CATEGORY(IES):
007A Stormwater	Great Egg Harbor Bay	RF - Stormwater

Location Description

There are no monitoring requirements for this discharge.

Contributing Waste Types

Storm Water Runoff

Requirements have not been defined for this Monitored Location.

MONITORED LOCATION:	RECEIVING LOCATION:	DISCHARGE CATEGORY(IES):
009A SW Outfall DSN 009A	Great Egg Harbor Bay	B - Industrial Wastewater

Location Description

Effluent samples for DSN 009A shall be taken at the sampling station for DSN 009A which is before mixing with DSN 010A in the discharge canal.

Contributing Waste Types

Steam Elec Cooling Water

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

The heat limits for DSN 009A and 010A shall apply to the sum of the heat contributions from both outfalls.

Table III - E - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Calculated
January thru December	QL	***	***		***	***	***			
Flow, In Conduit or Thru Treatment Plant	Intake From Stream	REPORT Monthly Average	REPORT Daily Average	MGD	*****	*****	*****	*****	Continuous	Calculated
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Daily Minimum	*****	9.0 Daily Maximum	SU	3/Week	Grab
January thru December	QL	***	***		***	***	***			
pH	Intake From Stream	*****	*****	*****	REPORT Daily Minimum	*****	REPORT Daily Maximum	SU	3/Week	Grab
January thru December	QL	***	***		***	***	***			
Chlorine Produced Oxidants	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	0.2 Daily Maximum	MG/L	3/Week	Grab
January thru December	MDL	***	***		***	0.1	0.1			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

The heat limits for DSN 009A and 010A shall apply to the sum of the heat contributions from both outfalls.

Table III - E - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Temperature, oC	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	38.3 Daily Maximum	DEG.C	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Temperature, oC	Intake From Stream	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	DEG.C	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Net Rate of Addition of Heat	Effluent Gross Value	REPORT Monthly Average	1530 Daily Maximum	MBTU/HR	*****	*****	*****	*****	1/Day	Calculated
January thru December	QL	***	***		***	***	***			
Temp. Difference, Summer (oC)	Effluent Net Value	*****	*****	*****	*****	REPORT Monthly Average	8.8 Daily Maximum	DEG.C	1/Day	Calculated
June thru August	QL	***	***		***	***	***			
Temp. Difference, Winter (oC)	Effluent Net Value	*****	*****	*****	*****	REPORT Monthly Average	19.3 Daily Maximum	DEG.C	1/Day	Calculated
September thru May	QL	***	***		***	***	***			

MONITORED LOCATION:	RECEIVING LOCATION:	DISCHARGE CATEGORY(IES):
010A SW Outfall DSN 010A	Great Egg Harbor Bay	B - Industrial Wastewater

Location Description

Effluent samples for DSN 010A shall be taken at the sampling station for DSN 010A which is before mixing with DSN 009A in the discharge canal.

Contributing Waste Types

Steam Elec Cooling Water

Consolidated DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

The heat limits for DSN 009A and 010A shall apply to the sum of the heat contributions from both outfalls. The final phase applies under repowered conditions.

Table III - F - 1: Consolidated DMR Limits and Monitoring Requirements

PHASE: 1-Initial **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Calculated
January thru December	QL	***	***		***	***	***			
Flow, In Conduit or Thru Treatment Plant	Intake From Stream	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Calculated
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6 Daily Minimum	*****	9 Daily Maximum	SU	3/Week	Grab
January thru December	QL	***	***		***	***	***			
pH	Intake From Stream	*****	*****	*****	REPORT Daily Minimum	*****	REPORT Daily Maximum	SU	3/Week	Grab
January thru December	QL	***	***		***	***	***			
Chlorine Produced Oxidants	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	0.2 Daily Maximum	MG/L	3/Week	Grab
January thru December	MDL	***	***		***	0.1	0.1			

Consolidated DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

The heat limits for DSN 009A and 010A shall apply to the sum of the heat contributions from both outfalls. The final phase applies under repowered conditions.

Table III - F - 1: Consolidated DMR Limits and Monitoring Requirements

PHASE: 1-Initial **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Temperature, oC	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	38.3 Daily Maximum	DEG.C	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Temperature, oC	Intake From Stream	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	DEG.C	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Boron, Total (as B)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	Grab
January thru December	QL	***	***		***	***	***			
Net Rate of Addition of Heat	Effluent Gross Value	REPORT Monthly Average	1530 Daily Maximum	MBTU/HR	*****	*****	*****	*****	1/Day	Calculated
January thru December	QL	***	***		***	***	***			
Temp. Difference, Summer (oC)	Effluent Net Value	*****	*****	*****	*****	REPORT Monthly Average	8.8 Daily Maximum	DEG.C	1/Day	Calculated
June thru August	QL	***	***		***	***	***			
Temp. Difference, Winter (oC)	Effluent Net Value	*****	*****	*****	*****	REPORT Monthly Average	19.3 Daily Maximum	DEG.C	1/Day	Calculated
September thru May	QL	***	***		***	***	***			

Consolidated DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

The heat limits for DSN 009A and 010A shall apply to the sum of the heat contributions from both outfalls. The final phase applies under repowered conditions.

Table III - F - 1: Consolidated DMR Limits and Monitoring Requirements

PHASE: 1-Initial **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Arsenic, Total Recoverable (as As)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	Grab
January thru December	QL	***	***		***	***	***			

Table III - F - 2: Consolidated DMR Limits and Monitoring Requirements

PHASE: 2-Final (Repowered) **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Calculated
January thru December	QL	***	***		***	***	***			
Flow, In Conduit or Thru Treatment Plant	Intake From Stream	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Calculated
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6 Daily Minimum	*****	9 Daily Maximum	SU	3/Week	Grab
January thru December	QL	***	***		***	***	***			
pH	Intake From Stream	*****	*****	*****	REPORT Daily Minimum	*****	REPORT Daily Maximum	SU	3/Week	Grab
January thru December	QL	***	***		***	***	***			

Consolidated DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

The heat limits for DSN 009A and 010A shall apply to the sum of the heat contributions from both outfalls. The final phase applies under repowered conditions.

Table III - F - 2: Consolidated DMR Limits and Monitoring Requirements

PHASE: 2-Final (Repowered) **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Chlorine Produced Oxidants	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	0.2 Daily Maximum	MG/L	3/Week	Grab
January thru December	MDL	***	***		***	0.1	0.1			
Temperature, oC	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	40.5 Daily Maximum	DEG.C	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Temperature, oC	Intake From Stream	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	DEG.C	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Boron, Total (as B)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	Grab
January thru December	QL	***	***		***	***	***			
Net Rate of Addition of Heat	Effluent Gross Value	REPORT Monthly Average	1530 Daily Maximum	MBTU/HR	*****	*****	*****	*****	1/Day	Calculated
January thru December	QL	***	***		***	***	***			
Temp. Difference, Summer (oC)	Effluent Net Value	*****	*****	*****	*****	REPORT Monthly Average	11.0 Daily Maximum	DEG.C	1/Day	Calculated
June thru August	QL	***	***		***	***	***			
Temp. Difference, Winter (oC)	Effluent Net Value	*****	*****	*****	*****	REPORT Monthly Average	19.3 Daily Maximum	DEG.C	1/Day	Calculated
September thru May	QL	***	***		***	***	***			

Consolidated DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Comments:

The heat limits for DSN 009A and 010A shall apply to the sum of the heat contributions from both outfalls. The final phase applies under repowered conditions.

Table III - F - 2: Consolidated DMR Limits and Monitoring Requirements

PHASE: 2-Final (Repowered) **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Arsenic, Total Recoverable (as As)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	Grab
January thru December	QL	***	***		***	***	***			

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - F - 3: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Manganese, Total Recoverable	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Cyanide, Total (as CN)	Effluent Gross Value	REPORT RQL = 40	UG/L	Grab	January thru December
Selenium, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Thallium, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - F - 3: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Beryllium, Total Recoverable (as Be)	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Barium, Total Recoverable (as Ba)	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Nickel, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Silver, Total Recoverable	Effluent Gross Value	REPORT RQL = 2	UG/L	Grab	January thru December
Zinc, Total Recoverable	Effluent Gross Value	REPORT RQL = 30	UG/L	Grab	January thru December
Cadmium, Total Recoverable	Effluent Gross Value	REPORT RQL = 4	UG/L	Grab	January thru December
Lead, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Chromium, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Copper, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Antimony, Total Recoverable	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Mercury Total Recoverable	Effluent Gross Value	REPORT RQL = 1	UG/L	Grab	January thru December
Acenaphthylene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Acenaphthene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	Grab	January thru December
Anthracene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Benzo(b)fluoranthene (3,4-benzo)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - F - 3: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Benzo(k)fluoranthene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Benzo(a)pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Bis(2-chloroethyl) ether	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Bis(2-chloroethoxy) methane	Effluent Gross Value	REPORT RQL = 26.5	UG/L	Grab	January thru December
Bis (2-chloroiso-propyl) ether	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Butyl benzyl phthalate	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Chrysene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Diethyl phthalate	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Dimethyl phthalate	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
1,2-Diphenyl-hydrazine	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Fluoranthene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Fluorene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Hexachlorocyclo-pentadiene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Hexachloroethane	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Indeno(1,2,3-cd)-pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - F - 3: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Isophorone	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
N-nitrosodi-n-propylamine	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
N-nitrosodiphenyl-amine	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
N-nitrosodimethyl-amine	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Nitrobenzene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Phenanthrene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Benzo(ghi)perylene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Benzo(a)anthracene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
1,2-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
1,2,4-Trichloro-benzene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Dibenzo(a,h) anthracene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
1,3-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
1,4-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
2-Chloronaphthalene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	Grab	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - F - 3: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Di-n-octyl Phthalate	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
2,4-Dinitrotoluene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
2,6-Dinitrotoluene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	Grab	January thru December
3,3'-Dichloro-benzidine	Effluent Gross Value	REPORT RQL = 60	UG/L	Grab	January thru December
4-Bromophenyl phenyl ether	Effluent Gross Value	REPORT RQL = 9.5	UG/L	Grab	January thru December
Naphthalene	Effluent Gross Value	REPORT RQL = 8	UG/L	Grab	January thru December
Bis(2-ethylhexyl) phthalate	Effluent Gross Value	REPORT RQL = 30	UG/L	Grab	January thru December
Di-n-butyl phthalate	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
Benzidine	Effluent Gross Value	REPORT RQL = 50	UG/L	Grab	January thru December
Malathion	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Demeton	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Hexachlorobenzene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Hexachlorobutadiene	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Mirex	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
1,3-Dichloropropene	Effluent Gross Value	REPORT RQL = 7	UG/L	Grab	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - F - 3: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
1,2,4,5-Tetrachloro-benzene	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
N-nitrosodiethyl-amine	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
N-nitrosopyrrolidine	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Carbon Tetrachloride	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,2-Dichloroethane	Effluent Gross Value	REPORT RQL = 3	UG/L	Grab	January thru December
Bromoform	Effluent Gross Value	REPORT RQL = 8	UG/L	Grab	January thru December
Chloroform	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
Toluene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Benzene	Effluent Gross Value	REPORT RQL = 7	UG/L	Grab	January thru December
Acrolein	Effluent Gross Value	REPORT RQL = 50	UG/L	Grab	January thru December
Acrylonitrile	Effluent Gross Value	REPORT RQL = 50	UG/L	Grab	January thru December
Chlorobenzene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Chlorodibromomethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Ethylbenzene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Methyl Bromide	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - F - 3: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Methyl Chloride	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Methylene Chloride	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Tetrachloroethylene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
Trichlorofluoro- methane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
1,1-Dichloroethane	Effluent Gross Value	REPORT RQL = 23.5	UG/L	Grab	January thru December
1,1-Dichloroethylene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,1-Trichloro- ethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,2-Trichloro- ethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,2,2-Tetrachloro- ethane	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
1,2-Dichloropropane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
1,2-trans-Dichloro- ethylene	Effluent Gross Value	REPORT RQL = 4	UG/L	Grab	January thru December
2-Chloroethyl Vinyl Ether (Mixed)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Bromodichloromethane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
Vinyl Chloride	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Trichloroethylene	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - F - 3: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Methoxychlor	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
N-Nitrosodi-n-butylamine	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Chloroethane	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Parachloro-m-cresol	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Parathion	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Phenols	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
2,4,5-Trichloro-phenol	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Delta BHC, Total (ug/l)	Effluent Gross Value	REPORT RQL = 0.02	UG/L	Grab	January thru December
Endosulfan Sulfate	Effluent Gross Value	REPORT RQL = 0.08	UG/L	Grab	January thru December
Beta Endosulfan	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Alpha Endosulfan	Effluent Gross Value	REPORT RQL = 0.02	UG/L	Grab	January thru December
Endrin Aldehyde	Effluent Gross Value	REPORT RQL = 0.1	UG/L	Grab	January thru December
PCB-1016 (Arochlor 1016)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
2,3,7,8-Tetrachloro-dibenzo-p-dioxin	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
4,4'-DDT(p,p'-DDT)	Effluent Gross Value	REPORT RQL = 0.06	UG/L	Grab	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - F - 3: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
4,4'-DDD(p,p'-DDD)	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
4,4'-DDE(p,p'-DDE)	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Aldrin	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Alpha BHC	Effluent Gross Value	REPORT RQL = 0.02	UG/L	Grab	January thru December
Beta BHC	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Gamma BHC (lindane),	Effluent Gross Value	REPORT RQL = 0.03	UG/L	Grab	January thru December
Chlordane	Effluent Gross Value	REPORT RQL = 0.2	UG/L	Grab	January thru December
Dieldrin	Effluent Gross Value	REPORT RQL = 0.03	UG/L	Grab	January thru December
Endosulfans, Total (alpha and beta)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Endrin	Effluent Gross Value	REPORT RQL = 0.04	UG/L	Grab	January thru December
Toxaphene	Effluent Gross Value	REPORT RQL = 1	UG/L	Grab	January thru December
Heptachlor	Effluent Gross Value	REPORT RQL = 0.02	UG/L	Grab	January thru December
Heptachlor Epoxide	Effluent Gross Value	REPORT RQL = 0.4	UG/L	Grab	January thru December
PCB-1221 (Arochlor 1221)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
PCB-1232 (Arochlor 1232)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - F - 3: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
PCB-1242 (Arochlor 1242)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
PCB-1248 (Arochlor 1248)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
PCB-1254 (Arochlor 1254)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
PCB-1260 (Arochlor 1260)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Polychlorinated Biphenyls (PCBs)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Chlorpyrifos	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
2-Chlorophenol	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
2-Nitrophenol	Effluent Gross Value	REPORT RQL = 18	UG/L	Grab	January thru December
2,4-Dichlorophenol	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
2,4-Dimethylphenol	Effluent Gross Value	REPORT RQL = 13.5	UG/L	Grab	January thru December
2,4-Dinitrophenol	Effluent Gross Value	REPORT RQL = 40	UG/L	Grab	January thru December
2,4,6-Trichloro-phenol	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
4-Chlorophenyl phenyl ether	Effluent Gross Value	REPORT RQL = 21	UG/L	Grab	January thru December
4-Nitrophenol	Effluent Gross Value	REPORT RQL = 12	UG/L	Grab	January thru December
4,6-Dinitro-o-cresol	Effluent Gross Value	REPORT RQL = 60	UG/L	Grab	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - F - 3: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Phenol Single Compound	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Pentachlorophenol	Effluent Gross Value	REPORT RQL = 30	UG/L	Grab	January thru December
Pentachlorobenzene	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Guthion	Effluent Gross Value	REPORT	UG/L	Grab	January thru December

MONITORED LOCATION:	RECEIVING LOCATION:	DISCHARGE CATEGORY(IES):
013A SW Outfall DSN 013A	Great Egg Harbor Bay	B - Industrial Wastewater

Location Description

Effluent samples for DSN 013A shall be taken at the sampling station for DSN 013A which is after the last stage of treatment prior to discharge through the pipe identified as DSN 013A.

Contributing Waste Types

Process Water

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Table III - G - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Metered
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Daily Minimum	*****	9.0 Daily Maximum	SU	Continuous	Metered
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Effluent Gross Value	*****	*****	*****	*****	30 Monthly Average	100 Daily Maximum	MG/L	2/Month	4 Hour Composite
January thru December	QL	***	***		***	***	***			
LC50 Statre 96hr Acu Mysid Bahia	Effluent Gross Value	*****	*****	*****	REPORT Report Per Minimum	*****	*****	%EFFL	1/Year	Composite
January thru December	AL	***	***		50	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Table III - G - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Oxygen, Dissolved (DO)	Effluent Gross Value	*****	*****	*****	4.0 Instant Minimum	5.0 Daily Avg Minimum	*****	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Petroleum Hydrocarbons	Effluent Gross Value	*****	*****	*****	*****	10 Monthly Average	15 Daily Maximum	MG/L	2/Month	Grab
January thru December	QL	***	***		***	***	***			
Carbon, Tot Organic (TOC)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	21 Monthly Average	REPORT Daily Maximum	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Selenium, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	4 Hour Composite
January thru December	RQL	***	***		***	***	8			
Arsenic, Total (as As)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	4 Hour Composite
January thru December	RQL	***	***		***	***	10			
Iron, Total (as Fe)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	1.0 Daily Maximum	MG/L	1/Quarter	4 Hour Composite
January thru December	QL	***	***		***	***	***			
Nickel, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	1.0 Daily Maximum	MG/L	1/Quarter	4 Hour Composite
January thru December	RQL	***	***		***	***	0.01			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Table III - G - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Zinc, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	1.0 Daily Maximum	MG/L	1/Quarter	4 Hour Composite
January thru December	RQL	***	***		***	***	0.03			
Chromium, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	0.2 Daily Maximum	MG/L	1/Quarter	4 Hour Composite
January thru December	RQL	***	***		***	***	0.01			
Copper, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	8.7 Daily Maximum	UG/L	1/Month	4 Hour Composite
January thru December	RQL	***	***		***	***	10			

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - G - 2: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Manganese, Total Recoverable	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Cyanide, Total (as CN)	Effluent Gross Value	REPORT RQL = 40	UG/L	Grab	January thru December
Thallium, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Beryllium, Total Recoverable (as Be)	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
Barium, Total Recoverable (as Ba)	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
Silver, Total Recoverable	Effluent Gross Value	REPORT RQL = 2	UG/L	4 Hour Composite	January thru December
Cadmium, Total Recoverable	Effluent Gross Value	REPORT RQL = 4	UG/L	4 Hour Composite	January thru December
Lead, Total Recoverable	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Chromium, Hexavalent Dissolved (as Cr)	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Antimony, Total Recoverable	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
Mercury Total Recoverable	Effluent Gross Value	REPORT RQL = 1	UG/L	4 Hour Composite	January thru December
Acenaphthylene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Acenaphthene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	4 Hour Composite	January thru December
Anthracene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Benzo(b)fluoranthene (3,4-benzo)	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - G - 2: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Benzo(k)fluoranthene	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
Benzo(a)pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
Bis(2-chloroethyl) ether	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Bis(2-chloroethoxy) methane	Effluent Gross Value	REPORT RQL = 26.5	UG/L	4 Hour Composite	January thru December
Bis (2-chloroiso-propyl) ether	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Butyl benzyl phthalate	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
Chrysene	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
Diethyl phthalate	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Dimethyl phthalate	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
1,2-Diphenyl-hydrazine	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Fluoranthene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Fluorene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Hexachlorocyclo-pentadiene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Hexachloroethane	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Indeno(1,2,3-cd)-pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - G - 2: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Isophorone	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
N-nitrosodi-n-propylamine	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
N-nitrosodiphenyl-amine	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
N-nitrosodimethyl-amine	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
Nitrobenzene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Phenanthrene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Pyrene	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
Benzo(ghi)perylene	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
Benzo(a)anthracene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
1,2-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
1,2,4-Trichloro-benzene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Dibenzo(a,h) anthracene	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
1,3-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
1,4-Dichlorobenzene	Effluent Gross Value	REPORT RQL = 20	UG/L	Grab	January thru December
2-Chloronaphthalene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	4 Hour Composite	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - G - 2: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Di-n-octyl Phthalate	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
2,4-Dinitrotoluene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
2,6-Dinitrotoluene	Effluent Gross Value	REPORT RQL = 9.5	UG/L	4 Hour Composite	January thru December
3,3'-Dichloro-benzidine	Effluent Gross Value	REPORT RQL = 60	UG/L	4 Hour Composite	January thru December
4-Bromophenyl phenyl ether	Effluent Gross Value	REPORT RQL = 9.5	UG/L	4 Hour Composite	January thru December
Naphthalene	Effluent Gross Value	REPORT RQL = 8	UG/L	4 Hour Composite	January thru December
Bis(2-ethylhexyl) phthalate	Effluent Gross Value	REPORT RQL = 30	UG/L	4 Hour Composite	January thru December
Di-n-butyl phthalate	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
Benzidine	Effluent Gross Value	REPORT RQL = 50	UG/L	4 Hour Composite	January thru December
Malathion	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Demeton	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Hexachlorobenzene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Hexachlorobutadiene	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Mirex	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
1,3-Dichloropropene	Effluent Gross Value	REPORT RQL = 7	UG/L	Grab	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - G - 2: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
1,2,4,5-Tetrachloro-benzene	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
N-nitrosodiethyl-amine	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
N-nitrosopyrrolidine	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Carbon Tetrachloride	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,2-Dichloroethane	Effluent Gross Value	REPORT RQL = 3	UG/L	Grab	January thru December
Bromoform	Effluent Gross Value	REPORT RQL = 8	UG/L	Grab	January thru December
Chloroform	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
Toluene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Benzene	Effluent Gross Value	REPORT RQL = 7	UG/L	Grab	January thru December
Acrolein	Effluent Gross Value	REPORT RQL = 50	UG/L	Grab	January thru December
Acrylonitrile	Effluent Gross Value	REPORT RQL = 50	UG/L	Grab	January thru December
Chlorobenzene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Chlorodibromomethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Ethylbenzene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Methyl Bromide	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - G - 2: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Methyl Chloride	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Methylene Chloride	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
Tetrachloroethylene	Effluent Gross Value	REPORT RQL = 9	UG/L	Grab	January thru December
Trichlorofluoro- methane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
1,1-Dichloroethane	Effluent Gross Value	REPORT RQL = 23.5	UG/L	Grab	January thru December
1,1-Dichloroethylene	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,1-Trichloro- ethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,2-Trichloro- ethane	Effluent Gross Value	REPORT RQL = 6	UG/L	Grab	January thru December
1,1,2,2-Tetrachloro- ethane	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
1,2-Dichloropropane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
1,2-trans-Dichloro- ethylene	Effluent Gross Value	REPORT RQL = 4	UG/L	Grab	January thru December
2-Chloroethyl Vinyl Ether (Mixed)	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Bromodichloromethane	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December
Vinyl Chloride	Effluent Gross Value	REPORT RQL = 10	UG/L	Grab	January thru December
Trichloroethylene	Effluent Gross Value	REPORT RQL = 5	UG/L	Grab	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - G - 2: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Methoxychlor	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
N-Nitrosodi-n-butylamine	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Chloroethane	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
Parachloro-m-cresol	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Parathion	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Phenols	Effluent Gross Value	REPORT	UG/L	Grab	January thru December
2,4,5-Trichloro-phenol	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Delta BHC, Total (ug/l)	Effluent Gross Value	REPORT RQL = 0.02	UG/L	4 Hour Composite	January thru December
Endosulfan Sulfate	Effluent Gross Value	REPORT RQL = 0.08	UG/L	4 Hour Composite	January thru December
Beta Endosulfan	Effluent Gross Value	REPORT RQL = 0.04	UG/L	4 Hour Composite	January thru December
Alpha Endosulfan	Effluent Gross Value	REPORT RQL = 0.02	UG/L	4 Hour Composite	January thru December
Endrin Aldehyde	Effluent Gross Value	REPORT RQL = 0.1	UG/L	4 Hour Composite	January thru December
PCB-1016 (Arochlor 1016)	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
2,3,7,8-Tetrachloro-dibenzo-p-dioxin	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
4,4'-DDT(p,p'-DDT)	Effluent Gross Value	REPORT RQL = 0.06	UG/L	4 Hour Composite	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - G - 2: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
4,4'-DDD(p,p'-DDD)	Effluent Gross Value	REPORT RQL = 0.04	UG/L	4 Hour Composite	January thru December
4,4'-DDE(p,p'-DDE)	Effluent Gross Value	REPORT RQL = 0.04	UG/L	4 Hour Composite	January thru December
Aldrin	Effluent Gross Value	REPORT RQL = 0.04	UG/L	4 Hour Composite	January thru December
Alpha BHC	Effluent Gross Value	REPORT RQL = 0.02	UG/L	4 Hour Composite	January thru December
Beta BHC	Effluent Gross Value	REPORT RQL = 0.04	UG/L	4 Hour Composite	January thru December
Gamma BHC (lindane),	Effluent Gross Value	REPORT RQL = 0.03	UG/L	4 Hour Composite	January thru December
Chlordane	Effluent Gross Value	REPORT RQL = 0.2	UG/L	4 Hour Composite	January thru December
Dieldrin	Effluent Gross Value	REPORT RQL = 0.03	UG/L	4 Hour Composite	January thru December
Endosulfans, Total (alpha and beta)	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Endrin	Effluent Gross Value	REPORT RQL = 0.04	UG/L	4 Hour Composite	January thru December
Toxaphene	Effluent Gross Value	REPORT RQL = 1	UG/L	4 Hour Composite	January thru December
Heptachlor	Effluent Gross Value	REPORT RQL = 0.02	UG/L	4 Hour Composite	January thru December
Heptachlor Epoxide	Effluent Gross Value	REPORT RQL = 0.4	UG/L	4 Hour Composite	January thru December
PCB-1221 (Arochlor 1221)	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
PCB-1232 (Arochlor 1232)	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - G - 2: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
PCB-1242 (Arochlor 1242)	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
PCB-1248 (Arochlor 1248)	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
PCB-1254 (Arochlor 1254)	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
PCB-1260 (Arochlor 1260)	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Polychlorinated Biphenyls (PCBs)	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Chlorpyrifos	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
2-Chlorophenol	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
2-Nitrophenol	Effluent Gross Value	REPORT RQL = 18	UG/L	4 Hour Composite	January thru December
2,4-Dichlorophenol	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
2,4-Dimethylphenol	Effluent Gross Value	REPORT RQL = 13.5	UG/L	4 Hour Composite	January thru December
2,4-Dinitrophenol	Effluent Gross Value	REPORT RQL = 40	UG/L	4 Hour Composite	January thru December
2,4,6-Trichloro-phenol	Effluent Gross Value	REPORT RQL = 20	UG/L	4 Hour Composite	January thru December
4-Chlorophenyl phenyl ether	Effluent Gross Value	REPORT RQL = 21	UG/L	4 Hour Composite	January thru December
4-Nitrophenol	Effluent Gross Value	REPORT RQL = 12	UG/L	4 Hour Composite	January thru December
4,6-Dinitro-o-cresol	Effluent Gross Value	REPORT RQL = 60	UG/L	4 Hour Composite	January thru December

Consolidated WCR - Annual Reporting Requirements:

Submit an Annual WCR: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP).

Table III - G - 2: Consolidated WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Phenol Single Compound	Effluent Gross Value	REPORT RQL = 10	UG/L	4 Hour Composite	January thru December
Pentachlorophenol	Effluent Gross Value	REPORT RQL = 30	UG/L	4 Hour Composite	January thru December
Pentachlorobenzene	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December
Guthion	Effluent Gross Value	REPORT	UG/L	4 Hour Composite	January thru December

MONITORED LOCATION:	RECEIVING LOCATION:	DISCHARGE CATEGORY(IES):
014A SW Outfall DSN 014A	Great Egg Harbor Bay	B - Industrial Wastewater

Location Description

Effluent samples for DSN 014A shall be taken at the sampling station for DSN 014A (located in the scrubber/wastewater treatment building) for all parameters with the exception of whole effluent toxicity (WET). Samples for WET shall be taken at the discharge canal for DSN 010A after DSN 014A discharges into it.

Contributing Waste Types

Process Water

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Table III - H - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	MGD	*****	*****	*****	*****	Continuous	Metered
January thru December	QL	***	***		***	***	***			
BOD, 5-Day (20 oC)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	2/Month	4 Hour Composite
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Daily Minimum	*****	9.0 Daily Maximum	SU	1/Day	Grab
January thru December	QL	***	***		***	***	***			
Solids, Total Suspended	Effluent Gross Value	8.18 Monthly Average	27.25 Daily Maximum	KG/DAY	*****	30 Monthly Average	100 Daily Maximum	MG/L	2/Month	4 Hour Composite
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Table III - H - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
LC50 Statre 96hr Acu Mysid Bahia	Effluent Gross Value	*****	*****	*****	REPORT Report Per Minimum	*****	*****	%EFFL	1/Year	Composite
January thru December	AL	***	***		50	***	***			
Temperature, oC	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	DEG.C	1/Day	Grab
January thru December	QL	***	***		***	***	***			
Petroleum Hydrocarbons	Effluent Gross Value	*****	*****	*****	*****	10 Monthly Average	15 Daily Maximum	MG/L	2/Month	Grab
January thru December	QL	***	***		***	***	***			
Carbon, Tot Organic (TOC)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	2/Month	4 Hour Composite
January thru December	QL	***	***		***	***	***			
Sulfide, Total (as S)	Effluent Gross Value	1.1 Monthly Average	2.1 Daily Maximum	KG/DAY	*****	3900 Monthly Average	7900 Daily Maximum	UG/L	1/Week	4 Hour Composite
January thru December	QL	***	***		***	***	***			
Sulfate, Total (as SO4)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	4 Hour Composite
January thru December	QL	***	***		***	***	***			
Iron, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/6 Months	4 Hour Composite
January thru December	QL	***	***		***	***	***			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Table III - H - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Boron, Total (as B)	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	4 Hour Composite
January thru December	QL	***	***		***	***	***			
Arsenic, Total Recoverable (as As)	Effluent Gross Value	0.23 Monthly Average	0.45 Daily Maximum	KG/DAY	*****	830 Monthly Average	1700 Daily Maximum	UG/L	1/Week	4 Hour Composite
January thru December	RQL	***	***		***	8	8			
Selenium, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	4 Hour Composite
January thru December	RQL	***	***		***	10	10			
Zinc, Total Recoverable	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	4 Hour Composite
January thru December	RQL	***	***		***	30	30			
Copper, Total Recoverable	Effluent Gross Value	0.47 Monthly Average	0.95 Daily Maximum	KG/DAY	*****	1700 Monthly Average	3500 Daily Maximum	UG/L	1/Week	4 Hour Composite
January thru December	RQL	***	***		***	10	10			
Mercury Total Recoverable	Effluent Gross Value	0.013 Monthly Average	0.027 Daily Maximum	KG/DAY	*****	49 Monthly Average	98 Daily Maximum	UG/L	1/Week	4 Hour Composite
January thru December	RQL	***	***		***	1	1			

Surface Water DMR Reporting Requirements:

Submit a Monthly DMR: Within twenty-five days after the end of every month beginning from the effective date of the permit (EDP)..

Table III - H - 1: Surface Water DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Bis(2-ethylhexyl) phthalate	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	UG/L	1/6 Months	4 Hour Composite
January thru December	RQL	***	***		***	30	30			

MONITORED LOCATION:	RECEIVING LOCATION:	DISCHARGE CATEGORY(IES):
015A SW Outfall DSN 015A	Great Egg Harbor Bay	B - Industrial Wastewater

Location Description

Effluent samples for DSN 015A shall be taken after exiting the Continuous Sequential Batch Reactor (CSBR) and before entering the industrial wastewater treatment plant.

Contributing Waste Types

Sanitary

Consolidated DMR Reporting Requirements:

Submit a Monthly DMR: within twenty-five days after the end of every month beginning from the effective date of the permit (EDP).

Table III - I - 1: Consolidated DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Flow, In Conduit or Thru Treatment Plant	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	GPD	*****	*****	*****	*****	Continuous	Metered
January thru December	QL	***	***		***	***	***			
pH	Effluent Gross Value	*****	*****	*****	6.0 Instant Minimum	*****	9.0 Instant Maximum	SU	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Nitrogen, Ammonia Total (as N)	Effluent Gross Value	REPORT Monthly Average	REPORT Daily Maximum	KG/DAY	*****	REPORT Monthly Average	REPORT Daily Maximum	MG/L	1/Month	Grab
January thru December	QL	***	***		***	***	***			
Enterococci	Effluent Gross Value	*****	*****	*****	*****	REPORT Monthly Average	REPORT Daily Maximum	#/100ML	1/Month	Grab
January thru December	QL	***	***		***	***	***			

Consolidated DMR Reporting Requirements:

Submit a Monthly DMR: within twenty-five days after the end of every month beginning from the effective date of the permit (EDP).

Table III - I - 1: Consolidated DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Coliform, Fecal General	Effluent Gross Value	*****	*****	*****	*****	200 Monthly Average	400 Daily Maximum	#/100ML	1/Month	Grab
January thru December	QL	***	***		***	***	***			

MONITORED LOCATION: SI6A Belt Filter Press

DISCHARGE CATEGORY(IES): B - Industrial Wastewater

Location Description

Annually, a representative sample of the belt filter pressed sludge generated from wastewater treatment shall be analyzed pursuant to the Sludge Quality Assurance Regulations (SQAR, N.J.A.C. 7:14C) each year sludge is removed for ultimate management.

Contributing Waste Types

Ind Residual-Other

Residuals DMR Reporting Requirements:

Submit an Annual DMR: due 60 calendar days after the end of each calendar year.

Table III - J - 1: Residuals DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Solids, Total	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	%TS	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Nitrate Nitrogen, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Nitrogen, Kjeldahl Total, Dry Wt	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Potassium Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			

Residuals DMR Reporting Requirements:

Submit an Annual DMR: due 60 calendar days after the end of each calendar year.

Table III - J - 1: Residuals DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Nitrogen, Ammonia Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Calcium Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Molybdenum Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Phosphorus Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Arsenic, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Selenium, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Copper, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			

Residuals DMR Reporting Requirements:

Submit an Annual DMR: due 60 calendar days after the end of each calendar year.

Table III - J - 1: Residuals DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Beryllium Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Cadmium, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Zinc, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Lead, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Nickel, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Mercury, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			
Chromium, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			

Residuals DMR Reporting Requirements:

Submit an Annual DMR: due 60 calendar days after the end of each calendar year.

Table III - J - 1: Residuals DMR Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Limit	Limit	Units	Limit	Limit	Limit	Units	Frequency	Sample Type
Iron, Dry Weight	Industrial Residuals	*****	*****	*****	*****	REPORT Monthly Average	*****	MG/KG	1/Year	Composite
January thru December	QL	***	***		***	***	***			

Residuals WCR - Annual Reporting Requirements:

Submit an Annual WCR: due 60 calendar days after the end of each calendar year.

Table III - J - 3: Residuals WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Amt Sludge Rmvd, Wet Cubic Yards	Industrial Residuals	REPORT	WCY/YR	Calculated	January thru December
Amt Sludge Rmvd, Wet Metric Tons	Industrial Residuals	REPORT	WMT/YR	Calculated	January thru December
Amt Sludge Rmvd, Gallons	Industrial Residuals	REPORT	GAL/YEAR	Calculated	January thru December
Total Amount of Sludge Removed	Industrial Residuals	REPORT	DMT/YR	Calculated	January thru December

Residuals WCR - Annual Reporting Requirements:

Submit an Annual WCR: due 60 calendar days after the end of each calendar year.

Table III - J - 3: Residuals WCR - Annual Limits and Monitoring Requirements

PHASE: Final **PHASE Start Date:** **PHASE End Date:**

Parameter	Sample Point	Compliance Quantity	Units	Sample Type	Monitoring Period
Solids, Total	Industrial Residuals	REPORT	%TS	Composite	January thru December

Residuals Transfer Reporting Requirements:

Submit an Annual RTR: due 60 calendar days after the end of each calendar year.

PART IV

SPECIFIC REQUIREMENTS: NARRATIVE

Notes and Definitions

1. Stormwater Notes

a. The following notes refer to the monitoring requirements contained in the tables located in Part III of the permit.

i. No visible sheen. The parameter Petroleum Hydrocarbons shall be analyzed in accordance with N.J.A.C. 7:14A-12.8 et seq.

ii. The term "Daily Min." means to report minimum value obtained (usually only applied to pH).

iii. The term "Average" means to report the average value of the results.

iv. The term "Daily Max." means to report the analytical result which yielded the highest concentration.

v. "NL" means not limited, but monitoring and reporting is required.

vi. Reporting of analytical results shall follow the procedures described in the Department's "Discharge Monitoring Report Instruction Manual" (latest revision).

vii. Grab samples shall be collected at the designated sampling points and shall be collected as soon as practicable within 30 minutes and no later than 45 minutes after the start of the stormwater discharge (ASWD). For sampling, follow guidelines in, "NJDEP Field Sampling Procedures Manual", latest edition.

viii. Grab -3 is a multi-grab sample that shall be collected at the sampling points as follows: the first grab sample shall be collected (in accordance with "NJDEP Field Sampling Procedures Manual", latest edition) within 30 minutes (or as soon thereafter as practicable) after stormwater discharge (ASWD); the second grab between 30 and 45 minutes ASWD (or as soon thereafter as practicable); and the third grab between 45 and 60 minutes ASWD (or as soon thereafter as practicable).

ix. pH values that are measured below lower pH limit are not in violation if they are not lower than the measured pH of the precipitation collected on site during the storm event. To qualify for this exception, pH of that precipitation must be reported on the monitoring report form as "Rain" pH.

x. A "discernible, confined and discrete conveyance" includes, but is not limited to, a pipe, ditch or channel. Examples of such conveyances include storm sewer pipes, drainage ditches, spillways, gullies, swales, gutters, curbs and streets.

2. Stormwater Definitions

a. Unless otherwise stated in this permit, the definitions set forth at N.J.A.C. 7:14A-1.2 and Discharge Monitoring Report (DMR) Instruction Manual are incorporated into this permit.

i. "Annual monitoring" means monitoring conducted at a minimum frequency of once every calendar year, beginning with the Effective Date of the Permit unless there is a different period specified in the permit.

ii. "Composite Sample" means a combination of individual (or continuously taken) samples (aliquots) of at least 100 milliliters, collected at periodic intervals over a specified time period. The composite can be either time proportional or flow proportional; either the time interval between each aliquot or the volume of each aliquot should be proportional to either the flow at the time of sampling or the total flow since the collection of the previous aliquot. Aliquots may be collected manually or automatically. For intermittent discharges less than 4 hours duration, aliquots shall be taken at intervals not to exceed 15 minutes. For intermittent discharges of 4 hours or more duration, aliquots shall be taken at intervals not to exceed 30 minutes.

iii. "EDP" means Effective Date of the Permit.

iv. "EDPM" means the Effective Date of the Permit Modification".

v. "mg/L" means milligrams per liter.

vi. "Outfall" shall mean (a) a point within the facility at which stormwater associated with the facility's industrial activity enters a surface water body from a discernible, confined and discrete conveyance; or (b) a point at which stormwater associated with the facility's industrial activity enters a surface water body from a discernible, confined and discrete conveyance for transport as stormwater to an offsite surface water body.

vii. "Process wastewater" means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product. Process wastewater includes, but is not limited to, "leachate" and cooling water other than " non-contact cooling water". (Please note that for the purposes of this NJPDES permit, the stormwater discharges regulated by this permit are not process wastewater)

viii. "Monthly Monitoring" means monitoring conducted at a minimum frequency of once every month, beginning with the EDP unless there is a different period specified.

ix. "Quarterly Monitoring "means monitoring conducted at a minimum frequency of once every three calendar months, beginning with the EDP unless there is a different period specified in the permit.

x. "Semiannual Monitoring" means monitoring conducted at a minimum frequency of once every six calendar months, beginning with the EDP unless there is a different period specified in the permit.

xi. "Weekly Monitoring" means monitoring conducted at a minimum of once every seven calendar day period, beginning with the EDP unless there is a different period specified.

xii. "Separate Storm Sewer" means a conveyance or system of conveyances (including roads with drainage systems, streets, catch basins, gutters, ditches, man-made channels, or storm drains): 1. Designed or used for collecting or conveying stormwater; 2. Which is not part of a combined sewer system; and 3. Which is not part of a publicly owned treatment works (POTW)

xiii. "Seven Day" or "Weekly Average Value" means the greatest sum of all daily discharges measured during any seven consecutive days, divided by the number of daily discharges measured during that period. Results may be expressed in loading (g/day or kg/d) and/or concentration (ug/L or mg/L). Only data collected within a single calendar month may be used in the calculation of a seven day or weekly average value for that month.

xiv. "Source materials" means any materials or machinery located at the facility and directly or indirectly related to process or other industrial activities which could be a source of pollutants in a stormwater discharge associated with industrial activity that is subject to N.J.A.C. 7:14A-11.5. Source materials include, but are not limited to: raw materials; intermediate products; final products; waste materials; by-products; industrial machinery and fuels; and lubricants, solvents, and detergents that are related to process or other industrial activities. Material or machinery that are not exposed to stormwater or that are not located at the facility are not "source materials".

xv. "Stormwater" means stormwater runoff, snow melt runoff, surface runoff and drainage

xvi. "ug/L " means micrograms per liter.

xvii. "Multiple Grab Composite" or " Multi-Grab" means a combination of individual samples (aliquots) collected at a specified frequency over a specified time period. Each aliquot must be collected in a glass vial with a septum cap and iced until delivered for analysis. An air space should remain in the vial. Each aliquot shall be analyzed individually. The recorded value will be the flow proportioned average of the individual analyses for the specific time period.

xviii. "Maximum Value" means the highest value measured during the monitoring period.

xix. "Minimum Value" means the lowest value measured during the monitoring period.

xx. "DMR" means a Discharge Monitoring Report form prepared by the Department.

xxi. "WCR" means a Wastewater Characterization Report form prepared by the Department.

Industrial Wastewater

A. MONITORING REQUIREMENTS

1. Standard Monitoring Requirements

a. Each analysis required by this permit shall be performed by a New Jersey Certified Laboratory that is certified to perform that analysis.

b. The Permittee shall perform all water/wastewater analyses in accordance with the analytical test procedures specified in 40 CFR 136 unless other test procedures have been approved by the Department in writing or as otherwise specified in the permit.

c. The permittee shall utilize analytical methods that will ensure compliance with the Quantification Levels (QLs) listed in PART III. QLs include, but are not limited to, Recommended Quantification Levels (RQLs) and Method Detection Levels (MDLs). If the permittee and/or contract laboratory determines that the QLs achieved for any pollutant(s) generally will not be as sensitive as the QLs specified in PART III, the permittee must submit a justification of such to the Bureau of Surface Water Permitting. For limited parameters with no QL specified, the sample analysis shall use a detection level at least as sensitive as the effluent limit.

d. All sampling shall be conducted in accordance with the Department's Field Sampling Procedures Manual, or an alternate method approved by the Department in writing.

e. All monitoring shall be conducted as specified in Part III.

f. All sample frequencies expressed in Part III are minimum requirements. Any additional samples taken consistent with the monitoring and reporting requirements contained herein shall be reported on the Monitoring Report Forms.

g. Annual and semi-annual wastewater testing shall be conducted in a different quarter of each year so that tests are conducted in each of the four permit quarters of the permit cycle. Testing may be conducted during any month of the permit quarters.

h. Monitoring for Wastewater Characterization Report parameters shall be conducted concurrently with the Whole Effluent Toxicity (WET) monitoring, when feasible.

i. Any influent and effluent sampling for toxic pollutant analyses shall be collected concurrently.

j. The permittee shall perform all residual analyses in accordance with the analytical test procedures specified in 40 CFR 503.8 and the Sludge Quality Assurance Regulations (N.J.A.C. 7:14C) unless other test procedures have been approved by the Department in writing or as otherwise specified in the permit.

k. DSN 001A - Flow is calculated based on the position of the control valve. The valve should be installed, calibrated and maintined to ensure that the instrumentation maintains accurate and precise measurements. DSN 009A and 010A - Flow shall be calculated based on the operating mode of the pumps. DSN 013A and 014A - Flow shall be metered.

l. The net amount of heat per unit time shall be calculated by multiplying heat capacity, discharge flow, and discharge-intake temperature difference. The heat limits for DSN 009A and 010A shall apply to the sum of the heat contributions from both outfalls.

m. Chlorine Produced Oxidants samples shall be taken once during each two hour period of bromination.

Industrial Wastewater

n. Net limitations shall be calculated by using the following formula: [(gross effluent concentration)*(gross effluent flow) - (intake concentration)*(intake flow)] / [gross effluent flow].

Individual intake and effluent flow values for that day shall be utilized in the above calculation.

B. RECORDKEEPING

1. Standard Recordkeeping Requirements

a. The permittee shall retain records of all monitoring information, including 1) all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation (if applicable), 2) copies of all reports required by this NJPDES permit, 3) all data used to complete the application for a NJPDES permit, and 4) monitoring information required by the permit related to the permittee's residual use and/or disposal practices, for a period of at least 5 years, or longer as required by N.J.A.C. 7:14A-20, from the date of the sample, measurement, report, application or record.

b. Records of monitoring information shall include 1) the date, locations, and time of sampling or measurements, 2) the individual(s) who performed the sampling or measurements, 3) the date(s) the analyses were performed, 4) the individual(s) who performed the analyses, 5) the analytical techniques or methods used, and 6) the results of such analyses.

C. REPORTING

1. Standard Reporting Requirements

a. The permittee shall submit all required monitoring results to the Department on the forms provided to them. The Monitoring Report Forms (MRFs) may be provided to the permittee in either a paper format or in an electronic file format. Unless otherwise noted, all requirements below pertain to both paper and electronic formats.

b. Any MRFs in paper format shall be submitted to the following addresses:

i. NJDEP
Division of Water Quality
Administrative Section
Mail Code 401-02B P.O. Box 420
Trenton, New Jersey 08625-0420.

ii. Delaware River Basin Commission (DRBC)
P. O. Box 7360
West Trenton, New Jersey 08628

iii. (if requested by the Water Compliance and Enforcement Bureau)
NJDEP: Southern Bureau of Water Compliance and Enforcement
One Port Center
2 Riverside Drive, Suite 201
Camden, New Jersey 08103

c. Any electronic data submission shall be in accordance with the guidelines and provisions outlined in the Department's Electronic Data Interchange (EDI) agreement with the permittee. Paper copies must be available for on-site inspection by DEP personnel or provided to the DEP upon written request.

d. All monitoring report forms shall be certified by the highest ranking official having day-to-day managerial and operational responsibilities for the discharging facility.

e. The highest ranking official may delegate responsibility to certify the monitoring report forms in his or her absence. Authorizations for other individuals to sign shall be made in accordance with N.J.A.C. 7:14A-4.9(b).

f. Monitoring results shall be submitted in accordance with the current Discharge Monitoring Report Manual and any updates thereof.

g. If monitoring for a parameter is not required in a monitoring period, the permittee must report "CODE=N" for that parameter.

h. If there are no discharge events during an entire monitoring period, the permittee must notify the Department when submitting the monitoring results. This is accomplished by placing a check mark in the "No Discharge this monitoring period" box on the paper or electronic version of the monitoring report submittal form.

D. SUBMITTALS

1. Standard Submittal Requirements

a. The permittee shall amend the Operation & Maintenance Manual whenever there is a change in the treatment works design, construction, operations or maintenance which substantially changes the treatment works operations and maintenance procedures.

E. FACILITY MANAGEMENT

1. Discharge Requirements

a. The permittee shall discharge at the location(s) specified in PART III of this permit.

b. The permittee shall not discharge foam or cause foaming of the receiving water that: 1) Forms objectionable deposits on the receiving water, 2) Forms floating masses producing a nuisance, or 3) Interferes with a designated use of the waterbody.

c. The permittee's discharge shall not produce objectionable color or odor in the receiving stream.

d. The discharge shall not exhibit a visible sheen.

e. When quantification levels (QL) and effluent limits are both specified for a given parameter in Part III, and the QL is less stringent than the effluent limit, effluent compliance will be determined by comparing the reported value against the QL.

f. The Permittee is authorized to use the following corrosion inhibitors, biocides, or other cooling water additives: Trisodium Phosphate, Hydrated Lime, Sulfuric Acid, Cleartreat, Di-Sodium Phosphate, Bromine and Spectrus OX1200. Use of additional additives requires Departmental approval. The permittee shall submit any request to add or modify additives that are not already approved at least 180 days prior to anticipated use.

2. Applicability of Discharge Limitations and Effective Dates

a. Surface Water Discharge Monitoring Report (DMR) Form Requirements

i. The final effluent limitations and monitoring conditions contained in PART III for all outfalls apply for the full term of this permit action, with the exception of outfall DSN 010A. The initial effluent limitations and monitoring conditions for DSN 010A begin on the effective date of the permit, and the final effluent limitations and monitoring conditions apply when BLE completes the repowering project.

b. Wastewater Characterization Report (WCR) Form Requirements

i. The final effluent monitoring conditions contained in PART III for all outfalls apply for the full term of this permit action.

3. Operation, Maintenance and Emergency conditions

a. The permittee shall operate and maintain treatment works and facilities which are installed or used by the permittee to achieve compliance with the terms and conditions of this permit as specified in the Operation & Maintenance Manual.

b. The permittee shall develop emergency procedures to ensure effective operation of the treatment works under emergency conditions in accordance with NJAC 7:14A-6.12(d).

4. Toxicity Testing Requirements - Acute Whole Effluent Toxicity (DSNs 001A, 013A and 014A)

a. The permittee shall conduct toxicity tests on its wastewater discharge in accordance with the provisions in this section. Such testing will determine if appropriately selected effluent concentrations adversely affect the test species.

b. Acute toxicity tests shall be conducted using the test species and method identified in Part III of this permit.

c. Part III of this permit contains an Action Level (AL) for acute Whole Effluent Toxicity. Toxicity Reduction and Implementation Requirements may be triggered based on exceedences of this Action Level. See Toxicity Reduction and Implementation Requirements section below for more details.

d. Any test that does not meet the specifications of N.J.A.C. 7:18, laboratory certification regulations, must be repeated within 30 days of the completion of the initial test. The repeat test shall not replace subsequent testing required in Part III.

e. The permittee shall resubmit an Acute Methodology Questionnaire within 60 days of any change in laboratory.

f. Submit an acute whole effluent toxicity test report: within twenty-five days after the end of every 12 month monitoring period beginning from the effective date of the permit (EDP). The permittee shall submit toxicity test results on appropriate forms.

g. Test reports shall be submitted to:

i. New Jersey Department of Environmental Protection
Mail Code 401-02B
Division of Water Quality
Bureau of Surface Water Permitting
401 East State Street
P.O. Box 420
Trenton, New Jersey 08625-0420.

5. Toxicity Reduction Implementation Requirements (TRIR)

a. The permittee shall initiate a tiered toxicity investigation if two out of six consecutive WET tests demonstrate that the effluent does not comply or will not comply with the toxicity limit or action level specified in Part III of this permit.

   i. If the exceedence of the toxicity limit or action level is directly caused by a documented facility upset, or other unusual event which has been identified and appropriately remedied by the permittee, the toxicity test data collected during the event may be eliminated when determining the need for initiating a TRIR upon written Department approval.

b. The permittee shall begin toxicity characterization within 30 days of the end of the monitoring period when the second toxicity test exceeds the toxicity limits or action levels in Part III. The monitoring frequency for toxicity testing shall be increased to monthly. Up to 12 additional tests may be required.

   i. The permittee may return to the toxicity testing frequency specified in Part III if four consecutive toxicity tests conducted during the Toxicity Characterization do not exceed the toxicity limit or action level.

   ii. If two out of any six consecutive, acceptable tests again exceed the toxicity limit or action level in Part III, the permittee shall repeat the Toxicity Reduction Implementation Requirements.

c. The permittee shall initiate a preliminary toxicity identification (PTI) upon the third exceedence of the toxicity limit or action level specified in Part III during toxicity characterization.

   i. The permittee may return to the monitoring frequency specified in PART III while conducting the PTI. If more frequent WET testing is performed during the PTI, the permittee shall submit all biomonitoring reports to the DEP and report the results for the most sensitive species on the DMR.

   ii. As appropriate, the PTI shall include:
      (1) treatment plant performance evaluation,
      (2) pretreatment program information,
      (3) evaluation of ammonia and chlorine produced oxidants levels and their effect on the toxicity of the discharge,
      (4) evaluation of chemical use and processes at the facility, and
      (5) an evaluation of incidental facility procedures such as floor washing, and chemical spill disposal which may contribute to effluent toxicity.

   iii. If the permittee demonstrates that the cause of toxicity is the chlorine added for disinfection or the ammonia concentration in the effluent and the chlorine and/or ammonia concentrations are below the established water quality based effluent limitation for chlorine and/or ammonia, the permittee shall identify the procedures to be used in future toxicity tests to account for chlorine and/or ammonia toxicity in their preliminary toxicity identification report.

   iv. The permittee shall submit a Preliminary Toxicity Identification Notification within 15 months of triggering TRIR. This notification shall include a determination that the permittee intends to demonstrate compliance OR plans to initiate a CTI.

d. The permittee must demonstrate compliance with the WET limitation or action level in four consecutive WET tests to satisfy the requirements of the Toxicity Reduction Investigation Requirements. After successful completion, the permittee may return to the WET monitoring frequency specified in PART III.

e. The permittee shall initiate a Comprehensive Toxicity Investigation (CTI) if the PTI does not identify the cause of toxicity and a demonstration of consistent compliance with the toxicity limit or action level in Part III can not be made.

i. The permittee shall develop a project study plan identifying the party or parties responsible for conducting the comprehensive evaluation, establish a schedule for completing the study, and a description of the technical approach to be utilized.

ii. If the permittee determines that the PTI has failed to demonstrate consistent compliance with the toxicity limit or action level in Part III , a Comprehensive Toxicity Investigation Workplan must be prepared and submitted within 90 days.

iii. The permittee shall summarize the data collected and the actions taken in CTI Quarterly Reports. The reports shall be submitted within 30 calendar days after the end of each quarter.

iv. The permittee shall submit a Final CTI Report 90 calendar days after the last quarterly report. The final CTI report shall include the corrective actions identified to reduce toxicity and a schedule for implementing these corrective actions.

f. Upon receipt of written approval from the Department of the corrective action schedule, the permittee shall implement those corrective actions consistent with that schedule.

i. The permittee shall satisfy the requirements of the Toxicity Reduction Implementation Requirements and return to the original toxicity monitoring frequency after corrective actions are implemented and the permittee demonstrates consistent compliance with the toxicity limit or action level in Part III in four consecutive toxicity tests.

ii. If the implemented corrective measures do not result in consistent compliance with the toxicity limit or action level in Part III, the permittee shall submit a plan for resuming the CTI.

iii. Documents regarding Toxicity Investigations shall be sent to the following:
New Jersey Department of Environmental Protection
Division of Water Quality
Bureau of Surface Water Permitting
Mail Code 401-02B P.O. Box 420
Trenton, New Jersey 08625-0420.

F. CONDITIONS FOR MODIFICATION

1. Notification requirements

a. The permittee may request a minor modification for a reduction in monitoring frequency for a non-limited parameter when four consecutive test results of "not detected" have occurred using the specified QL.

2. Causes for modification

a. The Department may modify or revoke and reissue any permit to incorporate 1) any applicable effluent standard or any effluent limitation, including any effluent standards or effluent limitations to control the discharge of toxic pollutants or pollutant parameters such as acute or chronic whole effluent toxicity and chemical specific toxic parameters, 2) toxicity reduction requirements, or 3) the implementation of a TMDL or watershed management plan adopted in accordance with N.J.A.C. 7:15-7.

b. The permittee may request a minor modification to eliminate the monitoring requirements associated with a discharge authorized by this permit when the discharge ceases due to changes at the facility.

G. Custom Requirement

1. Specific Sampling Requirements

a. Chlorine Produced Oxidants (CPO).

i. 001A, 009A and 010A - CPO may not be discharged from any operating unit for more than two hours in any one day, and not more than one unit in the plant may discharge chlorine at any one time, consistent with 40 CFR Part 423.

b. Total Petroleum Hydrocarbons for DSNs 009A and 010A - Petroleum hydrocarbons limits of 10 mg/L as a monthly average and 15 mg/L as a daily maximum are applicable to these outfalls although routine monitoring and reporting is not required at this time.

c. Chromium Monitoring at DSN 001A - Monitoring is only required if cooling tower additives that contain these chemicals are used during the month specified on the monitoring report form. If cooling tower additives containing these chemicals are not used during that month then the permittee shall report "Code = N.".

d. Effluent pH (for DSNs 001A, 009A and 010A) - If the pH at the intake is outside the range of 6 to 9 standard units, a discharge outside the range of 6.0 to 9.0 standard units shall be permitted provided that: a) if the intake value is greater than 9 s.u. then the discharge value may not exceed the intake value, and b) if the intake value is less than 6.0 s.u. then the discharge value may not be less than the intake value.

e. DSN 008A - The discharge of screen washwater from DSN 008A shall not cause an exceedance of the New Jersey Surface Water Quality Standards, N.J.A.C. 7:9B-1.1 et seq.

f. Continuous Temperature - When continuous temperature monitoring is in use, compliance with effluent limitations for temperature shall be based, except as otherwise provided by the provisions hereof, on an average of all corresponding temperature values (influent and effluent temperature values) available for the corresponding calendar day. Continuous temperature monitoring is required at all times when non-contact cooling water is being discharged from outfalls 009 and 010, but is not required during periods where a malfunction of continuous temperature monitoring equipment has occurred. As used herein, "malfunction" means an infrequent, unintentional and not reasonably preventable failure of continuous temperature monitoring equipment. "Malfunction" does not include a failure caused by improper or inadequate maintenance of continuous temperature monitoring equipment or careless or improper operational practices with respect to such equipment. Where such a malfunction has occurred, the permittee shall within 24 hours verbally communicate the following information to the Department via the DEP Hotline:.

i. the cause of the malfunction or the steps the permittee will take to determine such cause;.

ii. the anticipated duration of the malfunction; and.

iii. the steps the permittee is taking to prevent reoccurrence of the malfunction.

2. Impingement Alternatives Analysis and Section 316(b) Determination

a. Since the Section 316(b) final regulations are not due out until June 2013, the Department is requiring BLE to submit an Impingement Alternative Analysis to assess techynologies to minimize impingement mortality at the plant's intake. The purpose of this study is for BLE to evaluate and analyze a potential alternative for reducing impingement mortality with a focus on improved screens and fish return.

b. The Impingement Alternatives Analysis shall address the following factors at the intake:.

i. Replacement of the existing screens with Ristroph screens having a dual spraywash system (high-and-low-pressure). The screens shall have fish lifting buckets to hold the fish in water as they are lifted to the low-pressure spraywash removal system. The screen size shall be optimized to minimize impingement mortality and the wire mesh shall have a smooth face. These screens shall be operated continuously exclusive of periods of maintenance or operational requirements.

ii. Installation of a fish return system for the intake structure that is designed and constructed in consideration of the following factors: 1) using a fiberglass composite or a similar non-abrasive material that will be added to the full length of the interior surface of the trough of the fish return; 2) a trough with a rounded shape that will reduce abrasion and obstructions to fish; 3) designed to have sufficient capacity, flow volume and water level to facilitate safe return of impinged organisms to the Great Egg Harbor; and 4) designed so that the fish return conveyance terminus is submerged at all tidal stages on a year-round basis.

iii. Inclusion of scoping cost estimates for alternatives and a project implementation schedule.

c. In consideration of the regulatory and technical information available at this time, the Department hereby determines that conduct of an Impingement Alternatives Analysis to assess the installation of modified Ristroph traveling screens as well as a fish return system at the Cooling Water Intake Structure constitutes best technology available based on best professional judgement in accordance with Section 316(b) of the Clean Water Act.

d. Upon receipt of the Impingement Alternatives Analysis, the Department will evaluate the findings in concert with the final EPA regulations and will reopen the permit to incorporate permit conditions pursuant to N.J.A.C. 7:14A-16.4.

e. The permittee shall submit the Impingement Alternative Analysis on or before EDP + 15 months to the following address:

New Jersey Department of Environmental Protection
Mail Code 401-02B
Division of Water Quality
Bureau of Surface Water Permitting
401 East State Street
P.O. Box 420
Trenton, NJ 08625-0420.

3. Submissions as part of any NJPDES Renewal Application - Section 316(a) Special Condition

a. If upon renewal, the permittee wants the Section 316(a) variance to be continued, the request for the variance along with a basis for its continuance must be submitted at the time of the application for the renewal permit in accordance with 40 CFR 125.73(c). The Department's Section 316(a) Determination shall include, but not be limited to:.

i. a review of whether the nature of the thermal discharge or the aquatic population associated with the Station have changed;.

ii. whether the existing permit conditions have assured the protection and propagation of a balanced indigenous population;.

iii. whether the best scientific methods to assess the effect of the permittee's cooling system have changed; and.

iv. whether the technical knowledge of stresses caused by the cooling system has changed.

4. Thermal Modeling Study

a. Repowering the Station will result in changes to the thermal plume. After the Station completes repowering on May 1, 2016, the permittee shall complete a thermal plume characterization study utilizing the Cornell Mixing Zone Expert System (CORMIX) software and other appropriate far-field modeling as necessary. The study shall be submitted to the Department by April 30, 2017.
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Stormwater

A. Permit Overview

1. Summary of Stormwater Permit Requirements

a. The permittee shall develop, implement, update and maintain a Stormwater Pollution Prevention Plan (SPPP), which includes a Drainage Control Plan (DCP) (see Part IV.B).

b. The permittee shall develop, implement, update and maintain site specific best management practices (BMPs) to achieve the design criteria and effluent limitations as specified in the permit (see Part IV.C).

c. The permittee shall be responsible for supervising and managing the operation and maintenance of the facility, which includes routine inspections of the facility (see Part IV.D).

d. The permittee shall conduct stormwater monitoring in accordance with the permit (see Part IV.E).

e. The permittee shall summarize facility inspections in written reports and submit reports and certifications to ensure compliance with this permit (see Part IV.F).

f. The permittee shall retain records of all monitoring information, maintenance records, and copies of all reports (including the SPPP and soil erosion and sediment control plans) required by this permit (see Part IV.G).

B. Stormwater Pollution Prevention Plan

1. SPPP Minimum Requirements

a. The SPPP shall address all stormwater discharges associated with industrial activity, including source materials, at the facility.

b. The facility shall gain drainage control of the stormwater runoff from all areas of industrial activity, including source materials, in accordance with section B.4 below.

c. The permittee shall include a DCP as a section within the SPPP.

d. The SPPP shall identify the BMPs that are in place to eliminate, reduce, or minimize exposure of industrial activity and source materials to stormwater discharging to surface or ground water.

e. The SPPP shall demonstrate that upon implementation the stormwater discharges associated with industrial activity meet the permit conditions contained in this permit.

f. The SPPP shall address, but is not limited to, the following outside areas:

i. outside vehicle/equipment fueling, maintenance and washing areas, and fuel storage (e.g., diesel fuel);

ii. outside areas used for waste management/handling or storage of equipment (e.g., dumpsters, scrap metal, vehicle parts, drums, and garbage);

iii. pavement and access roads needing repairs and unpaved surfaces with the potential to erode and discharge solids (soils and/or sediments) to surface waters;

iv. catch basins, trench drains and roof drains discharging to surface waters;

v. loading docks;

vi. spills/leaks/non-stormwater discharges of fluid products, raw material, vehicle coolants, lubricants and other chemicals;

Stormwater

vii. above ground storage tanks; and

viii. other areas/activities with stormwater discharges to surface water associated with industrial activity as defined by the federal rules (40 CFR 122.26 (b) (14)) and contained by reference in the state rules.

g. The SPPP shall identify BMPs to stablize surface soils and reduce sediment transport, using BMPs outlined in the Standards for Soil Erosion and Sediment Control in New Jersey where appropriate, in accordance with the Soil Erosion and Sediment Control Act N.J.S.A. 4:24-39 et seq.

h. The SPPP shall identify production and non-production areas that have a high potential for soil erosion or a known soil erosion problem. Appropriate vegetative, structural, or stabilization measures shall be selected to limit erosion and sediment transport in these areas.

i. The SPPP shall be prepared, implemented, and maintained in accordance with good engineering practices and shall include, at a minimum, all of the items and information identified in Part IV. B, C and Attachment 1: "Contents of the Stormwater Pollution Prevention Plan".

j. The original SPPP shall be retained at the facility for use by the facility and inspection by the Department.

2. BMP Design Criteria

a. For monitoring only requirements, BMPs shall be designed, implemented and maintained to achieve the following design criteria upon implementation of the SPPP:

i. COD <= 120 mg/L

ii. TSS <= 100 mg/L

iii. pH = 6.0 - 9.0 S.U.

iv. Oil and Grease <= 15 mg/L

b. If the monitoring results exceed the design criteria (or are outside the range for pH, if applicable), the permittee shall:

i. evaluate potential sources for the specific parameter that did not comply with the design criteria;

ii. identify BMPs (e.g., source control, operational control, stormwater treatment) by which the permittee can further reduce stormwater contamination;

iii. evaluate whether any improvements or changes to the SPPP are warranted to reduce and control this parameter concentration;

iv. update the SPPP with any improvements or changes; and

v. summarize the results in the annual report in accordance with Part IV.F, including remedial actions taken.

c. If the permittee fails to design, implement and maintain the BMPs identified in the SPPP to meet the design criteria, or to make significant progress toward meeting the design criteria, the Department may modify the permit in accordance with N.J.A.C. 7:14A-16.4(b)11.

3. Drainage Control

a. Drainage Control shall be established in all areas of industrial activity. In areas of industrial activity that cannot be diverted to a permitted outfall, the permittee shall do one of the following:

i. convert the area(s) to "no discharge" area(s) and manage stormwater collected in the area(s) as industrial wastewater; or

ii. eliminate industrial activity in these areas.

b. To establish drainage control, a facility shall:

i. ensure all "stormwater associated with industrial activity" as defined in N.J.A.C. 7:14A-1.2, is discharged through a regulated outfall(s) to surface water and/or a ground water discharge location;

ii. create a representative monitoring point for each regulated outfall(s) to surface water and/or a ground water discharge location; and

iii. separate the discharge of stormwater not associated with industrial activity (e.g. rooftop runoff, employee parking, open space) from regulated discharges, where practicable.

c. Outfall Stabilization

i. The permittee shall design, implement and maintain BMPs to prevent downstream erosion and sedimentation caused by stormwater, and/or process wastewater runoff at the outfall(s).

ii. At a minimum, the BMPs shall meet the most recent technical standards listed in Standards for Soil Erosion and Sediment Control in New Jersey, Engineering Standards Section titled Standard for Off-Site Stability.

iii. Where erosion at the outfall structure occurs the permittee shall restore the eroded areas to its previous condition.

4. Drainage Control Plan

a. The facility shall develop, implement and/or maintain a DCP containing the following:

i. a written narrative; and

ii. a Drainage Control Map.

b. The DCP shall be certified by a New Jersey licensed Professional Engineer.

c. Elevations for the Drainage Control Map shall be measured by a New Jersey licensed surveyor.

d. The written narrative shall describe how the facility will establish drainage control and shall include the following:

i. facility name;

ii. NJPDES permit number (NJ0005444) and Program Interest I.D. number;.

iii. an alpha-numeric discharge serial number (e.g., DSN001A, DSN002A, DSN003A) for each surface water monitoring point(s);

iv. an alpha-numeric identifier (e.g. I01I, I02I, I03I) for each ground water monitoring point(s);

v. the latitude and longitude for each monitoring point(s);

vi. the name of all receiving water bodies (for discharges to surface water) and assigned New Jersey Surface Water Quality Standards' classifications;

vii. the name of the receiving aquifer (for discharges to ground water) and assigned New Jersey Ground Water Quality Standards' classification; and

viii. a description of any proposed stormwater treatment.

e. Unless otherwise specified by the Department the Drainage Control Map shall be an appropriate engineering scale, which is legible and clearly depicts the following information when applicable:

i. site boundary;

ii. title block containing tax block and lot number;

iii. north directional arrow;

iv. date prepared and subsequent revisions;

v. final grading of drainage areas, including elevations and flow arrows showing the drainage to regulated outfalls;

vi. location of flow diversion structures, treatment units (i.e. lined and unlined basins);

vii. location of surface water outfalls (regulated and unregulated) and discharge structures;

viii. location of ground water discharge point(s) and discharge structure;

ix. receiving waters and their location;

x. areas of industrial activity (i.e. Maintenance, fueling, equipment cleaning and storage);

xi. access roads;

xii. existing buildings and other structures; and

xiii. employee and customer parking.

5. Modification of SPPP to include the DCP

a. An existing facility with a SPPP shall modify the plan to include the Drainage Control requirements outlined in Part IV.B.

b. The modified SPPP that includes the DCP shall be implemented in accordance with the permit and certified on a form provided by the Department.

c. The deadline for the preparation and implementation of the SPPP to include the DCP and submittals are contained in Part IV.F of the permit.

6. Continuation of SPPP

a. The SPPP shall be updated and maintained in accordance with the permit and recertified on a form provided by the Department in accordance with the schedule in Part IV.F.

C. Site Specific Best Management Practices

1. Coal Pile Area

a. Implement and maintain measures that prevent dust emissions from coal handling areas (including storage area).

b. The dike surrounding the coal pile must be tall enough to control the spill of coal particles.

c. Coal particles outside the diked areas shall be minimized to the best extent practicable. These particles shall be removed from these areas upon discovery.

d. The discharge of coal particles to the Great Egg Harbor Bay shall be minimized to the furthest extent practicable.

2. Delivery Vehicles

a. Implement and maintain measures that prevent or minimize the contamination of stormwater runoff from delivery vehicles arriving at the plant site.

b. The permittee shall have procedures to inspect delivery vehicles to ensure the overall integrity of the body and container.

c. The permittee shall have procudres to deal with leakage/ spillage from delivery vehicles or contaniers.

3. Ash Loading and Unloading Areas

a. Implement and maintain measures to reduce and control the tracking of ash/ residue from the ash loading areas.

i. Clear the ash building floor and adjacent roadways of spillage, debris and excess water before departure of each loaded vehicle.

b. Develop and maintain procedures to reduce ash residue that may be tracked onto access roads traveled by residue handling vehicles, and reduce ash residue on exit roads leading into and out of residue handling areas.

4. Fueling and Spill Prevention Planning

a. Implement and maintain measures to ensure the potential of spills or leakage of any liquid are minimized or eliminated.

b. Any spills shall be cleaned up properly immediately after discovery.

5. Outdoor Maintenance, Fabrication, and Assembly

a. Implement and maintain inspection protocols following any maintenance, fabrication , and assembly procedures occurring outdoors.

b. Any waste oils, dust, sandblast residue, steel shavings, etc. shall be cleaned up and properly disposed of in accordance with all applicable State, Federal, and local requirements.

6. Scrap Metal

a. Scrap metal exposed to stormwater must be free of residual materials (i.e., oils, tar, fine particles) and deterioration due to oxidation.

b. The permittee shall have in place a program for the periodic removal of scrap metal material.

c. Scrap metal that is not free of residual materials or is deteriorating must be removed or stored in a watertight container and covered.

7. BMP - Vehicle/ Equipment Washing

a. The discharge of wash waters to surface water are strictly prohibited. Designate and clearly mark equipment-cleaning areas.

b. Cleaning of aircraft, ground vehicles and equipment shall be carried out indoors and drain to sanitary sewer when ever practicable.

c. Outdoor cleaning management practices shall be conducted in such a manner as to prevent the discharge of wash water to surface water.

d. This should include the following management practices, or equivalent measures:

i. Section off portions of stormwater sewer system for the equipment cleaning drainage area. Pump the wash water from the sectioned off stormwater sewer system for recycling, discharge to sanitary sewer, or proper disposal by a licensed waste hauler.

ii. Construct a pad and dike. Pump wash water to be recycled, discharged to sanitary sewer, or properly disposed of by a waste hauler. Maintain and clean dike area of residuals.

iii. Place impermeable tarps in a diked area. Vacuum or pump wash water and remove tarp after use.

8. BMP - Vehicle/ Equipment Maintenance

a. Designate and clearly mark areas for equipment maintenance.

b. Establish standard operating procedures that prevent or minimize the contamination of stormwater runoff from all areas used for aircraft, ground vehicle, and equipment maintenance.

c. This shall include, but is not limited to, the following management practices, or equivalent measures:

i. Performing maintenance indoors when practicable.

ii. Maintaining and organizing inventory of materials used in maintenance areas.

iii. Draining all parts containing fluids prior to maintenance and/or disposal.

iv. Prevent the practice of hosing down the apron or hanger floor. The use of dry cleanup methods, and/or collecting the stormwater runoff from the maintenance area and providing treatment or recycling should be considered.

9. BMP - Discharge of Stormwater from Secondary Containment (version #1)

a. The following BMP shall be implemented for discharging stormwater from secondary containment areas at the facility. The facility is only authorized to discharge stormwater.

i. The stormwater in the containment area shall not come into contact with the contents of the wastewater storage tank(s).

ii. The discharge pipe/outfall from the containment area shall have a valve and that valve shall remain closed at all times except when discharging stormwater.

iii. A visual inspection of the tank shall be performed to insure the tank's physical integrity; which must be completed on a routine basis and an inspection log maintained.

iv. Regular maintenance of the wastewater tank must be performed (e.g. painting, repair) to insure the tank's integrity.

v. A visual inspection of the stormwater is to be performed prior to the onset of a discharge to insure that the stormwater has not been contaminated by the contents of the tank or by other materials.

vi. Alternative means for disposing the stormwater must be established for stormwater that has or is suspected to have been contaminated by the contents of the tank or by other materials.

10. BMP - Bulk Transfer Of Liquids

a. In areas where liquid materials are transferred in bulk from truck or rail cars, the permittee shall take appropriate measures to minimize contact of transferred material with precipitation.

i. Hose connection points at storage containers shall be inside containment areas.

ii. Drip pans must be used in areas that are not in a containment area where spillage may occur (e.g. hose reels, connection points with rail cars or trucks).

iii. All loading and unloading racks must be surrounded by curbs to contain accidental spills. Install a canopy over a loading rack.

iv. In order to prevent discharge of spills or leaks where precipitation is contained, contained areas should be restrained by valves or other equivalent means.

11. Salavaged Equipment and Spare Parts

a. Dismanteled equipment that is being used for is salvageable parts and is exposed to stormwater shall be free of residual materials (i.e., oils, lubricants, tar, fine particles) and deterioration due to oxidation.

b. Salvageable equipment that is not free of residual materials or is deteriorating must be removed or stored in a water tight container and covered.

D. Operations and Maintenance

1. Facility and BMP Operation and Maintenance

a. The permittee shall be responsible for supervising and managing the operation and maintenance of this facility. This requires implementing BMPs that must be installed or used by the permittee to achieve compliance with the SPPP. Proper operation and maintenance also requires the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit.

b. The operation and maintenance activities shall be verified through the certification and annual reporting requirements of Part IV.F.

c. Frequent and thorough inspections, at a frequency of at least quarterly, are necessary to ensure adequate functioning of control measures. Inspections are recommended to be conducted during dry periods as well as storm events.

i. Inspections during dry periods allow facilities to identify and address any problems prior to a storm event, thereby minimizing the chance for stormwater contamination.

ii. Inspections during significant storm events ensure that measures are functioning as originally intended and provide an opportunity for facilities to observe what materials and/or activities are exposed to stormwater.

2. Soil Erosion Sediment Control Plan

a. For construction activities disturbing one (1) acre or more of total land area, authorization shall be obtained under either a modification to this permit or under NJPDES Permit No. NJ0088323 (Construction Activity Stormwater General Permit), for stormwater from such construction activities that would be discharged to surface waters.

b. Land disturbances that may result in a stormwater discharge authorized by this permit, shall be executed only in accordance with a soil erosion and sediment control plan certified pursuant to N.J.S.A. 4:24-43, or requirements for soil erosion and sediment control established in or pursuant to a municipal ordinance in accordance with N.J.S.A. 4:24-48, whichever is applicable.

c. A copy of this plan shall be retained by the permittee for a period of at least five (5) years after the completion of construction.

E. Monitoring

1. Criteria for monitoring a valid storm event

a. The criteria for a valid storm event is any precipitation that produces a stormwater discharge including discharges from snow melt events.

i. The permittee shall monitor its stormwater discharge during a valid storm event from the outfalls designated in the DCP.

ii. For stormwater that accumulates during a storm event in a containment area impoundment or other device that controls the discharge, the facility shall monitor its stormwater at the time of the discharge.

iii. A wet basin must be monitored whenever there is a discharge.

b. Sampling a Snowmelt Event

i. If the snowmelt results in a discharge, the permittee may collect a sample of the snow melt as part of the site monitoring requirements.

ii. Snowmelt samples must be representative of the area of industrial activity. Samples may not be collected from snow stockpiles from non-industrial areas of the facility.

iii. The permittee shall only sample one snow melt event per calendar year.

2. Monitoring Locations

a. Samples shall be taken in compliance with the specified monitoring locations in Part III.

b. Monitoring locations shall not be changed without notification to and the approval from the Department.

c. Monitoring locations shall be included on the DCP map as detailed in Part IV.B.

3. Monitoring Schedule

a. Samples shall be collected in accordance with the sampling frequency established by the Department in Part III.

4. Collection and Analysis of Samples

a. Stormwater samples shall be collected within 30 minutes of the stormwater discharge or as soon thereafter as practicable.

b. The facility can collect their own sample.

c. Samples shall be analyzed by a New Jersey certified laboratory (N.J.A.C 7:18).

d. All samples shall be analyzed in accordance with approved U.S. Environmental Protection Agency (EPA) methods contained in 40 CFR Part 136, unless otherwise specified in the footnotes in Part IV.A.

e. The permittee may take samples and have analysis made by a New Jersey Certified laboratory on additional occasions to those specified in this permit. If so, the maximum values of all analytical results taken during the sampling period shall be reported. In addition, if an average value is required to be reported, all sample results shall be used when calculating the average. However, for pH, both minimum and maximum values are reported.

f. If only one analysis for a given parameter is made during any monitoring period specified in this permit, the result of such analysis shall be construed as the maximum value for that parameter, for said monitoring period.

F. Inspections, Reports and Submissions

1. Stormwater Monitoring Report Forms (MRFs)

a. Sampling results shall be summarized and reported in accordance with the requirements contained in Part III of this permit on the appropriate monitoring report forms mailed separately by the Bureau of Permit Management.

b. If the permittee finds that the pre-printed MRFs they receive from the Department contain errors from the monitoring and reporting requirements contained in Part III, the permittee should contact the Bureau of Nonpoint Pollution Control at (609) 633-7021.

c. The permittee is required to monitor its stormwater discharge and submit appropriate MRFs to the Department in accordance with conditions of permit even if pre-printed MRFs contain errors.

d. The permittee shall make hand corrections to the MRFs if corrected forms are not received prior to the monitoring report due date.

2. Reporting Storm Event Information

a. In order for the Department to better assess the monitoring results provided by the permittee, the Department requires that storm event information is recorded and reported along with monitoring results.

b. The permittee shall record and submit the following storm event information on the appropriate MRFs provided by the Department:

i. date of storm event;

ii. time storm event began;

iii. storm event duration;

iv. time of sample collection;

v. rainfall amount at time of sampling (an estimate of the inches of rainfall or snowfall, which can be based upon such data as recorded by a local weather monitoring station(s) or an onsite maintained monitoring station);

vi. date of sample collection;

vii. type of storm event (rain or snowmelt); and

viii. pH of rain (optional).

3. Reporting "No Discharge"

a. If a discharge does not occur during a particular reporting period, the permittee should check "No Discharge this monitoring period" on the MRF transmittal sheet for each discharge monitoring location which had "no discharge"

b. The Department shall compare all reports of "No Discharge" against information provided by Premium AccuWeather services (https://wwwl.accuweather.com/premium_login.php) to determine if a discharge has occurred.

4. MRF Submittals

a. Unless otherwise specified or directed, signed copies of required MRFs shall be submitted postmarked no later than the 25th day of the calendar month following the completed monitoring period to the address given below:

i. New Jersey Department of Environmental Protection
Mail Code 401-02B
Office of Permit Management
P.O. Box 420 - 401 E. State St.
Trenton, New Jersey 08625-0420
Attn. Monitoring Reports

b. Submitting MRFs

i. The permittee shall continue to submit MRFs in accordance with the schedule established in the previous permit cycle.

c. The permittee may also participate in electronic reporting of the MRFs via NJ Online with the Electronic Discharge Interchange (EDI) system. Follow the directions in the NJPDES Monitoring Report Form Manual to participate.

5. SPPP Modification Submittal Requirements

a. A SPPP shall be modified to include a DCP in accordance with the submittal schedule below:

i. Copies of the SPPP including the DCP shall be submitted to the Department's Southern Bureau of Water Compliance and Enforcement and the Bureau of Nonpoint Pollution Control.

ii. Submit the SPPP: within 18 months from the effective date of the permit (EDP).

iii. The implementation of the modified SPPP to include the DCP shall be certified through the annual recertification in accordance with Part IV.F below.

iv. This certification form is available on the Department website at http://www.state.nj.us/dep/dwq/forms.htm#stormforms

6. Annual Inspections, Reports, and Recertifications

a. The permittee shall conduct annual inspections of the facility in accordance with N.J.A.C. 7:14A-24.9(a) to assess all areas contributing to the stormwater discharge authorized by this permit, to evaluate whether the SPPP complies with and is implemented in accordance with this permit, and whether additional measures are needed to meet the conditions of this permit.

b. The permittee shall prepare an annual report.

c. The annual report shall be completed prior to the annual recertification submission date.

d. The annual report shall be retained by the permittee in accordance with Part IV.G for a period of at least five (5) years.

e. Submit an Annual Report: by September 1 of each year beginning from the effective date of the permit (EDP).

f. The annual report shall be submitted with the annual recertification. This certification form is available on the Department website at http://www.state.nj.us/dep/dwq/forms.htm#stormforms.

g. The annual report shall summarize the findings of the annual inspection in accordance with a. above, including:

   i. The date of the inspection; and

   ii. Name(s) and title of the inspector(s).

h. The annual report shall include a summary comparing the MRF data with the design criteria. This summary shall include:

   i. An explanation of two (2) or more exceedances of the design criteria for the same parameter;

   ii. Changes and/or upgrades to BMPs to meet design criteria, and

   iii. A discussion of the effectiveness of the BMP changes and/or upgrades.

i. The permittee shall annually certify on a form provided by the Department that the facility has completed their annual report as specified above and is in compliance with the SPPP and this permit.

   i. Submit the Generic Certification Form certifying that the annual inspection was conducted: by September 1 of each year beginning from the effective date of the permit (EDP).

   ii. Any incident of non-compliance shall be identified in the certification. This shall include the steps being taken to remedy the non-compliance, and to prevent such incidents from recurring.

G. Record Keeping

1. Record Keeping Requirements

a. The permittee shall retain records of all monitoring information, maintenance records, and copies of all reports required by this permit for a period of at least five (5) years.

2. SPPP Record Keeping Requirements

a. The SPPP shall be signed by the permittee, and the original shall be retained at the facility for use by the facility and inspection by the Department.

b. The SPPP shall be made available, upon request, to a representative of the Department and to the owner and operator of any municipal separate storm sewer receiving the stormwater discharge.

c. The SPPP shall be made available to the public upon request, except as noted below.

d. The facility may claim any portion of the SPPP as confidential in accordance with the provisions set forth in N.J.A.C. 7:14A-18.2.

3. Soil Erosion and Sediment Control Plan Record Keeping

a. If the permittee is required to implement a Soil Erosion and Sediment Control Plan as a result of construction activities or land disturbance greater than or equal to one (1) acre, a copy of the plan shall be retained by the permittee for a period of at least five (5) years after the completion of construction.

ATTACHMENT 1:
CONTENTS OF THE
STORMWATER
POLLUTION PREVENTION PLAN

Table of Contents

I. Stormwater Pollution Prevention Plan

The following outline provides the key elements of an acceptable Stormwater Pollution Prevention Plan (SPPP). The purpose of the SPPP is to meet the following objectives:

A. identify potential sources of pollution and source materials onsite which may reasonably be expected to affect the quality of stormwater discharges associated with industrial activity;

B. establish drainage control;

C. describe and ensure that practices are implemented to eliminate and/or reduce pollutants from source materials in stormwater discharges associated with industrial activity to meet design criteria and effluent limitations; and

D. ensure continued compliance with the terms and conditions of this permit.

II. Stormwater Pollution Prevention Team

The permittee shall form and identify a Stormwater Pollution Prevention Team in the SPPP. The team is responsible for developing, implementing and maintaining the SPPP in accordance with good engineering practices. The SPPP shall identify names of those individuals and their titles within the facility's organization who are members of the team. The SPPP shall clearly identify the team leader who has the authority to make decisions and give directives to effectively implement the plan. The plan shall clearly identify the responsibilities of each team member. The activities and responsibilities of the team shall address all aspects of the facility's SPPP which are provided below.

III. Description of Existing Environmental Management Plans

The SPPP team shall evaluate the facility's existing environmental management plans and programs for consistency with this permit and determine which provisions, if any, from these other plans can be incorporated by reference into the SPPP.

Examples of plans which may be referred to when applicable to the site include: Discharge Prevention Containment and Countermeasure (DPCC), Discharge Cleanup and Removal (DCR), Preparedness Prevention and Contingency Plan (PPCP, 40 CFR Parts 264 and 265), the Spill Prevention Control and Countermeasures (SPCC) requirements (40 CFR Part 112), the National Pollutant Discharge Elimination System Toxic Organic Management Plan (NPDESTOMP, 40 CFR Parts 413, 433, and 469), and the Occupational Safety and Health Administration (OSHA) Emergency Action Plan (29 CFR Part 1910). A copy of any plans referred to in the SPPP should be kept on-site with the SPPP.

IV. Site Assessment

The Site Assessment shall describe the physical facility and the potential pollutant sources (materials, activities and areas) which may be reasonably expected to affect the quality of stormwater discharges. The key elements of the site assessment shall include, at a minimum, the following requirements:

A. Inventory Requirements

Each facility must develop and update annually, as appropriate, an inventory which includes, at a minimum, the following:

1. List Source Materials

Make list of source materials that have been used, loaded/unloaded, stored, treated, spilled, leaked and/or disposed onsite in a manner to allow exposure to stormwater; and

2. List Sources of Water

Make list of any domestic wastewater, non-contact cooling water, or process waste water (see definitions in Part IV of permit), that is generated at the facility and discharged through separate storm sewers (see definition in Part IV of permit) to surface waters.

3. List Permits

Make list of any current NJPDES (New Jersey Pollutant Discharge Elimination System) permits or permit application that the facility may have for such discharges.

B. Drainage Control Plan Narrative & Mapping Requirements

Refer to Part IV Section B, *Drainage Control Plan*, of this permit.

V. Best Management Practices (BMP) Selection and Description

The SPPP shall describe the BMPs used to prevent or minimize pollution from source materials and areas of industrial activity. The permittee shall evaluate the information from the site assessment phase of this plan to identify potential and existing sources of stormwater contaminated by source material. **All non-stormwater discharges to surface water and/or groundwater must be eliminated or permitted.** The permittee shall design, implement and maintain BMPs to meet **design criteria and effluent limits** specified in this permit. Based upon the site assessment performed, the permittee shall develop BMPs that will effectively eliminate or reduce pollutant loadings in stormwater discharges from the facility

in accordance with the following sections. The evaluation and selection of the BMPs shall address each area, and/or activity where source materials are exposed to stormwater discharging to surface water.

A. Pollution Prevention

All contact of source materials and industrial activities with stormwater shall be prevented and/or minimized. Each BMP that is used to minimize and/or prevent such contact shall be identified and discussed in the SPPP.

1. Diverting Stormwater

Approved diversion of contaminated stormwater to either a domestic or industrial wastewater treatment plant may also be considered when choosing an appropriate BMP where feasible. (Diversion to groundwater may require additional Department approval, or modification to this permit. Contact the Bureau of Nonpoint Pollution Control if a discharge to groundwater is being considered.)

2. Good Housekeeping

The SPPP must include a good housekeeping program to help maintain a clean and orderly work place. For certain activities or areas, contact of source materials with stormwater may be prevented and/or minimized merely by using good housekeeping methods. The following are some simple procedures that a facility can consider incorporating into an effective good housekeeping program:

- conduct cleanup immediately after discovery of leaks and spills;
- implement careful material storage practices;
- improve operation and maintenance of industrial machinery and processes;
- maintain up-to-date material inventory;
- maintain well organized work areas;
- provide regular pickup and disposal of waste materials;
- maintain dry and clean floors and ground surfaces by using brooms, shovels, vacuum cleaners, or cleaning machines; and
- train employees about good housekeeping practices.

3. Spill Prevention and Response

Specific spill prevention and response procedures shall be developed. The procedures shall include material handling, storage and equipment operation and maintenance requirements used to prevent and/or eliminate spills and/or leaks. A valid SPCC or DPCC shall satisfy this requirement provided the plan includes spill prevention/cleanup for all site chemicals, wastewater and raw materials.

The permittee shall develop and implement a Spill Prevention Plan. At a minimum, the Plan shall include:

- Spill Response Coordinator
- Procedures for preventing and/or cleaning up spills
- List of available spill cleanup materials, including brooms, shovels, absorbents, heavy equipment, containers, etc. (The list should include normal level of inventory that will be kept onsite).
- Description of employee training, including:
  - Location of spill cleanup materials, containers and equipment
  - Procedures for preventing and/or cleaning up spills
  - Company Spill Response Coordinator (the coordinator can be listed by Title, such as, Plant Manager)
  - List of emergency phone numbers
- Description of routine inspections for spills, leaks, damage to containment and spill structures. Inspections are recommended to be done weekly.
- Routine inventory of spill cleanup materials and equipment.

4. Site Stabilization and Dust Control

The SPPP shall include standards for site stabilization and dust control designed to prevent transport of particulate and sediment from areas devoid of vegetation and to prevent downstream soil erosion caused by routine operations and uncontrolled stormwater runoff. At a minimum the standards shall meet the technical standards found in *the Standards for Soil and Erosion and Sediment Control in New Jersey* and shall include:

- traffic control to prevent or minimize disturbance of unstabilized areas and to prevent disturbance of vegetative covers and/or other dust control mechanisms
- entrance/exit stabilization to prevent or minimize transport of sediment and dust outside the site property line
- dust control to prevent or minimize movement of dust and sediment from exposed soil areas

5. Erosion Control at the Outfalls

The permittee shall inventory all outfall structures that are used to convey and discharge stormwater. Stormwater velocity at the outfalls shall be controlled to prevent downstream erosion and/or degradation and ensure stabilization.

- All work shall be accomplished in accordance with applicable State, Federal, and local approvals.
- The permittee shall design, implement and maintain BMPs to prevent downstream erosion and sedimentation caused by stormwater, mine dewatering and/or process wastewater runoff at the outfall(s).
- At a minimum, the BMPs shall meet the most recent technical standards listed in Standards for Soil Erosion and Sediment Control in New Jersey, Engineering Standards Section titled Standard for Off-Site Stability.
- The permittee shall repair and maintain the erosion controls and shall restore the eroded areas to its previous condition.
- The permittee shall include a narrative of stormwater runoff control and list of BMPs in the site SPPP.

6. Preventative Maintenance

The SPPP shall include a Preventative Maintenance Program to include timely and regular inspections and maintenance of stormwater management devices (e.g., cleaning oil/water separators, catch basins, drip pans, catch basins, detention basins, covers, treatment units) and routine inspections of facility equipment and operations to detect faulty equipment. Equipment (such as tanks, piping, containers, and drums) should be checked regularly for signs of deterioration.

7. Engineered Treatment Systems

If the permittee implements specific BMPs to minimize or eliminate specific pollutants and discovers that the BMPs continue to be ineffective, then the permittee will need to consider an engineered treatment system. Treatment systems may require additional permitting from NJDEP.

Stormwater treatment systems that are **verified** by NJCAT (http://www.njcat.org/) and **certified** by NJDEP maybe considered to meet permit requirements. But site specific applications needs to be evaluated before installing any system. The permittee should contact the Department's permitting case manager prior to purchasing and installing an engineered treatment system.

VI. Implementation Schedule

The SPPP shall include an implementation schedule for all structural and non-structural BMP's including a schedule(s) for removal, coverage, minimization of exposure of source material to stormwater, and/or stormwater diversion or treatment. The schedule shall meet the deadlines established in the permit in accordance with Part IV.

Upon completion of the initial SPPP, those BMP's (e.g., spill response, good housekeeping) that may readily be implemented as specified in Part IV of the permit, shall be done so within 30 days, if not already practiced.

VII. General Plan Requirements

This section provides additional requirements on the administrative requirements related to finalizing your SPPP. It covers (1) required certifications, (2) required signatures, and (3) requirements for plan location and access

A. Certification of Stormwater Pollution Prevention Plan

1. The SPPP

The SPPP preparation, implementation, and annual recertification shall be certified in accordance with Part IV on the appropriate form provided by the Department.

B. Required Signatures for SPPP and Certifications

The SPPP and Certifications shall be signed as follows:

For a corporation: A president, secretary, treasurer or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions for the corporation; or the manager of one or more manufacturing, production, or operating facilities, provided:
(1) The manager is authorized to make management decisions that govern the operation of the regulated facility, including having the explicit or implicit duty of recommending major capital investment, initiating and directing comprehensive measures to assure long term compliance with environmental laws and regulations, and ensuring that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; or
(2) The authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.

For a partnership or sole proprietorship: A general partner or the proprietor

For a government agency: A ranking elected official; or the chief executive officer of the agency; or a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrator); or **duly authorized representative** as defined in N.J.A.C. 7:14A - 4.9 (b).

Whenever there are two or more permittees for the facility, all of those permittees shall jointly submit this Certification, unless permittees received authorization on different dates and this Certification is therefore due from them at different dates.

C. Plan Location and Public Access

1. SPPP Records

The SPPP and inspection and preventative maintenance records or logs shall be maintained on site at all times. These documents must be made available, upon request, to a representative of the Department and to the owner and operator of any municipal separate storm sewer receiving the stormwater discharge.

2. Make Available to the Public

The SPPP shall be made available to the public upon request. The facility may claim any portion of the SPPP as confidential in accordance with the provisions set forth in N.J.A.C. 7:14A-18.2.

3. Submit a Copy of the SPPP

A copy of the SPPP shall be submitted to the appropriate Regional Bureau of Water Compliance and Enforcement and to the Bureau of Nonpoint Pollution Control. Revisions made to the facility's SPPP shall be submitted also

4. Inspections and Annual Reports

- Regular Inspections

  The SPPP shall establish a schedule for regular inspections as required in Part IV Section F of the permit. Regular inspections shall include inspections of the facility's equipment, exposed source materials and industrial areas to ensure that all elements of the SPPP are in place and working properly. Inspections shall be conducted by qualified, trained plant personnel. Records of these inspections shall be kept onsite with the SPPP. At a minimum, these inspection records shall consist of the following:
  - date of inspection;
  - location of and problem(s) identified;
  - steps taken to correct problem(s) and prevent recurrence; and
  - inspector's name and title.

  In addition these inspection records shall record any incidents such as leaks or accidental discharges, and any failures or breakdowns of structural BMPs.

- Annual Inspections

Conduct annual inspections as required in Part IV Section F of the permit. The annual inspections are necessary to evaluate the implementation of the SPPP for preparation of the annual report and annual certifications.

- Annual Reports

  The SPPP shall include a method to routinely and continually evaluate the SPPP for effectiveness, any flaws that may have developed, and maintenance that may be required. The routine evaluation must include, but not be limited to:
  - Regular and annual inspections
  - Inspection logs and records
  - Internal reporting
  - Plan revisions to correct any flaws detected in the SPPP or to reflect changes/additions at the facility
  - Logs of preventative maintenance performed at the facility.

VIII. Special Requirements

A. Facilities Subject to Emergency Planning and Community Right-to-Know Statute

For facilities subject to the Emergency Planning and Community Right-to-Know Act (EPCRA) Section 313, the SPPP shall include, or cite the location of, any spill reports prepared under that Act.

B. Facilities with SPCC Plans, DPCC Plans, or DCR Plans

The SPPP shall include, or cite the location(s) of, any Spill Prevention Control and Countermeasure Plan (SPCC Plan) prepared under 40 CFR 112 and section 311 of the Clean Water Act, 33 U.S.C.§1321; and any discharge prevention, containment and countermeasure plan (DPCC plan) and discharge cleanup and removal plan (DCR plan) prepared under N.J.A.C. 7:1E.

C. Facilities Undergoing Construction Activities

Whenever construction activities are undertaken at the facility, the SPPP shall be amended, if necessary, so that the SPPP continues to be accurate and to meet the requirements of Part I of this permit.